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SECTOR 3 — CHART INFORMATION

SECTOR 3

COAST OF CHINA—DAJIN TO JIAOWEI JIAO, INCLUDING HAINAN DAO

Plan.—This sector describes the S coast of China from Dajin to Jiaowei Jiao, the sequence being from E to W including the N shore of Hainan Dao bordering Qiongzhou Haixia. Following the description of the strait, Hainan Dao is described clockwise from Ching-hsin Chiao, its NE extremity, to Ping-ma-chiao, the island's NW extremity.

General Remarks

3.1 Winds—Weather.—The climate in this sector is governed by the monsoons. The Northeast Monsoon is much stronger and more persistent than its counterpart. It begins around September and brings rain with cool temperate weather.

This monsoon is rarely interrupted over the open sea and from between the N and E more than half the time. The direction of the wind is steadiest from December to February. In March and April winds from between S and E become increasingly frequent as opposed to the middle of the season when interruptions in the wind pattern last only for a day or two. May is the month of transition to the Southwest Monsoon.

The Southwest Monsoon is very irregular and often weak. Winds are from SE to SW, but not as strong or consistent as during the Northeast Monsoon. Hot weather begins in early summer and calms make the heat oppressive. Showers occur in the afternoon almost daily during this season. At the end of August, W winds are as common as E winds near Hainan Dao. These W winds bring rain and thick weather.

Near Hainan Dao and through Qiongzhou Haixia heavy squalls of short duration are common from June through August, although they may occur during any season of the year. These squalls are usually preceded by a blue haze over the land. The most dangerous type of squall is the arch squall, which is preceded by clouds rising from the horizon in the form of an arch. Heavy rain occurs when the arch is passing overhead. They can be expected inland off the river estuaries and in places where the hinterland is mountainous when strong offshore winds are occurring.

Typhoons may occur in any month, but they are more frequent from June through November. The typhoons occurring in August and September are considered more violent.

Fog occurs about two to three days per month from January to April between Hainan Dao and 112°E, however, to the E of this meridian the frequency increases.

Coastal fogs are fairly common from January through April, although not more so than at sea. During the Northeast Monsoon, particularly from January through March, visibility in Qiongzhou Haixia is poor. Misty or drizzly weather may reduce visibility to less than 2 miles with little or no warning.

Tides—Currents.—Tides in the South China Sea are mostly of a diurnal character. The principal changes follow the declination of the moon rather than its phases. Shortly after the moon crosses the equator, the diurnal tide vanishes and the semi-diurnal tides occur. As declination increases, the diurnal

tide increases, and when the declination is near its maximum, N or S, single day tides may occur. The springs of the semi-diurnal tide occur shortly after a full or new moon. The neaps of the semi-diurnal tide occur shortly after quadrature. The springs of the diurnal tide occur shortly after the moon reaches its maximum declination.

Currents of the South China Sea flow in accordance with the general pattern of the wind. The main currents are those caused by the monsoons. The SW current of the Northeast Monsoon is stronger and more constant than the NE current of the Southwest Monsoon. A considerable portion of the currents of both monsoons exceeds a rate of 1 knot.

Between 14° and 21°N, the SW or W current of the Northeast Monsoon occurs from October through February, with March and April being the months of transition.

The NE or E current occurs from May through August, September being the month of transition. In December and January the current attains a maximum rate of 0.5 knot to 1.5 knots.

During the Northeast Monsoon, and also in August and September when E winds prevail, the current frequently sets W at a rate of 3 knots off **Tungtafan Shih** (21°28'N., 112°23'E.). It abates only to 1.5 knots when the tidal current, under ordinary circumstances, would be setting E.

Frequently during the Southwest Monsoon, if the wind shifts to the E, a W set is experienced. Off the SE and SW coasts of Hainan Dao, currents resulting from monsoons may be encountered. From October through March, the currents set NW at a rate of 0.7 to 1 knot. From June through August, the currents set SE at a rate of 0.5 to 0.8 knot.

Aspect.—For a distance of 115 miles WSW of T'ung-ku, the peninsula extending from the mainland 6 miles W of Ta-chin, to the mouth of the Shui-lung Chiang, the S coast of China is irregular and fronted by off-lying islands. Most of these islands and other dangers in this portion of the sector lie within the 20m curve. Along the coast, mud flats and banks are prevalent. The shore is backed by hills and mountains reaching heights of over 1,219m. There are no ports of commercial importance to foreign shipping in this part of the sector.

To the W of the above-mentioned river mouth, the coast trends SW for about 35 miles to the entrance of Kuang-chou Wan, within which is situated the port of Chan-chiang. This large bay, filled with islands and shoals, indents Leizhou Bandao. The S side of this peninsula, about 45 miles S of Kuang-chou Wan's main entrance, forms the N side of Qiongzhou Haixia.

Qiongzhou Haixia, the passage between the peninsula and the island of Hainan Dao is encumbered with numerous sandy shoals and banks in its E approaches, but a deep navigable channel leads between them.

The strait proper is about 50 miles long and 10 miles wide at its narrowest part. Specific regulations govern vessels transiting the strait.

Hainan Dao is 156 miles long NE-SW, and 100 miles wide at its widest part. Its coast is about 560 miles in length. Ch'i-chou Ch'un Tao is the largest group of off-lying islets, lying as far as 18 miles from the NE end of the island.

The E and NW sides of Hainan Dao are reef-fringed in places. The SE and S coasts are bold, but banks and shoals have been reported along them in places as well as along the SW coast. Sand or sand and gravel beaches front most of the coast. These are interrupted by bold, rocky points and low, marshy land bordering lagoon and river entrances.

The S half of the island is mountainous and vegetation-covered, attaining elevations of over 1,829m in the Wu-chih Shan which at times are visible from Qiongzhou Haixia. Spurs from these ranges extend to the coast at the S two-thirds of the island where they form bold capes and headlands. Low-lying river valleys and constricted coastal plains lie between these ranges.

A flat to rolling plain, interrupted by steep isolated hills, extends over the N third of Hainan Dao. Much of this plain is under cultivation.

Only three harbors on the island are of commercial importance; the others provide only limited facilities to native junks. Of the main ports, Haikou is on the N coast, Tung-hai-t'an is on the W coast, and Sanya is on the S coast.

Caution.—Several wrecks lie off the coast described in this sector. Their type and location can best be seen on the charts of the area concerned.

Much of the area described in this sector has been imperfectly surveyed, especially between the offshore islands and the mainland and along the mainland shores in the many bights and bays. With the exception of the S side of Qiongzhou Haixia, much of the coast of Hainan Dao has not been thoroughly examined. Many shoals and reefs fringe the island, some of them extending seaward as far as 10 miles or more. The position of vessels may not be accurately determined by visual bearings in some instances.

Permission to enter Chinese waters should be obtained well in advance of any voyage here.

Certain portions of the coastline covered in this sector are reported to be dangerous due to mines.

Tong Kwa To Shui-Lung Chiang

3.2 Tong Kwa (21°51'N., 112°54'E.), at its S extremity, is a peninsula extending from the mainland to within about 1.5 miles of the NW side of Dajin. The passage between the two, Tong Kwa Hai, is shoal and used only by small craft. An islet, 93m high, lies in the passage off the S side of the peninsula and the S extremity of Tong Kwa is fringed by dangerous sunken rocks. The SE side of the above peninsula between its SW extremity and Chiao-tsui Shan, 10 miles NE, is high and rugged.

Several islands and islets lie offshore to the SW of Tong Kwa peninsula. The N shores of the islands of Hsia-ch'uan Shan and Shangchuang Dao form the S side of San-hsia Kou, a passage leading to a large bay to the W of Tong Kwa.

Shangchuang Dao (21°41'N., 112°48'E.) is a large, mountainous, and irregularly shaped island which rises to a height of 485m in its N part. Its NE extremity lies 5.3 miles S of the SW extremity of Tong Kwa peninsula. Its W extremity

lies 11 miles SW of Tong Kwa and its SW extremity, Shangchuan Jiao 14 miles SSW of its NE extremity.

Three large, open, unexamined bays indent the E coast of Shangchuang Dao. Some drying rocks lie off the NE extremity of the island and three islets, the highest of which is 52m high, are found about midway down the coast.

Off the SE coast lies the island of Weijia Dao which is rocky, marked by a light, and over 206m high. A deep channel, about 0.2 mile wide, separates the cliffs of the two islands.

Wuzhu Zhou (21°36'N., 112°53'E.), a barren island over 230m high, is separated from the SE end of Shangchuang Dao by a channel about 2.7 miles wide with a depth of 21.9m. An islet, 70m high, lies close off the NW side of Wuzhu Zhou.

The N coast of Shangchuang Dao is rugged and irregular with shallow bays and coves indenting its entire length. Huang-mao T'ou, a narrow peninsula, extends from shore about 5 miles W of the NE extremity of the island and forms the E side of a rather large bay which is divided by four offshore islets. On the E shore of this bay, in its N portion, stands a large monastery.

3.3 Pai Yen (21°41'N., 112°42'E.) is the point marking the W extremity of Shangchuang Dao. The W coast of the island, between the above point and Shangchuang Dao, is indented by three distinct bays. The northernmost, Ta Wan, indents the middle of the island to a distance of about 4 miles, nearly cutting Shangchuang Dao into two parts.

The middle bay on the W coast, Shati Wan, is entered between Shati Jiao and a point about 1.5 miles SE and indents the coast 1.5 miles. A naval activity consisting of a barracks and a jetty used by patrol craft is situated within the bay. Depths of 9.2m are found in the entrance, gradually decreasing to 5.5m about 0.3 mile from the head of Shati Wan.

Meitou Zhou, a rocky islet, 23m high, lies on the N side of the entrance to Shati Wan. The channel between this islet and Shangchuang Dao is foul.

A reef, marked by a lighted buoy, was reported (1957) to lie in the bay. The position of the reef is not known.

Anchorage.—Vessels can anchor in a depth of 9.2m about 0.3 mile SE of Meitou Zhou or in a depth of 8.2m with the drying rocks at the head of the bay bearing 050° about 0.8 mile off. Large junks may be found anchored off Shati Hsu, the village at the head of the bay.

Tatien Wan is the southernmost bay on the W side of the island. A signal station is situated near Shangchuang Dao, SE of the S entrance to this bay. Rocks extend about 0.2 mile seaward to the S entrance to Tatien Wan.

The S coast of the island is rather rugged and steep-to.

3.4 Xiachuan Dao (Hsia-ch'uan Shan) (21°40'N., 112°36'E.), a large and irregularly shaped island, lies within the 10m curve to the W of Shangchuang Dao across a strait encumbered with islets. The island is about 11 miles long on its NE-SW axis and 7 miles wide on its E-W axis.

The W side of the island between the islet off its NE extremity and Pai-shih Chiao, its SW extremity, is indented by a number of bays and coves. Anchorage can be taken in 9 to 11m, soft mud, about 1 mile W of the southernmost cove on this W shore, just N of Pai-Shih Chiao. The E side of Hsia-ch'uan Shan, between the NE end of the island and its E

extremity, is indented by a shallow bight about 2.5 miles across its mouth.

Nan-ao Wan is a small but well-protected bay on the S coast of the island. The bay is protected by a peninsula extending E from the SW extremity of Hsia-ch'uan Shan and by the island of Wang-fu Chou, which lies about 1.2 miles E of the E end of the peninsula across the mouth of Nan-ao Wan.

Wang-fu Chou (Wang-fu Zhou), 186m high, is separated from the S shore of the larger island by a channel about 0.5 mile wide which is encumbered by fishing stakes. Passage Islet lies close off the SW end of Wang-fu Chou with a reef joining the two. Rocks extend 100m W from Passage Islet and along the W shore of Wang-fu Chou.

Depths of 9.2m are found in the S entrance to the bay which leads to the W of the above mentioned off-lying rocks and to the E of the peninsula on the SW end of Hsia-ch'uan Shan. Depths of 7.3 to 8.2m are found in the middle of the bay NW of Wang-fu Chou.

Anchorage.—Vessels can anchor in Nan-ao Wan in 8.2m, soft mud, about 0.5 mile off the W side of Wang-fu Chou. This anchorage offers protection from E winds, but is exposed to S winds and swells. Anchorage can be taken in about 7.3m, mud, in the middle of the W part of the bay. This anchorage affords protection from S and SE winds.

Some sunken rocks lie off the E entrance point of Nan-ao Wan. Between this point and the E extremity of the island, 3.2 miles NE, there is a shallow bight.

3.5 San-hsia Kou (21°47'N., 112°52'E.), the passage between Shangchuang Dao and Hsia-ch'uan Shan and the mainland to the N, leads SW from SW of Tong Kwa peninsula to the island of Mang Chou, a distance of over 25 miles. Depths of 4.8 to 5.5m are found in this unmarked fairway.

The channel is entered from the E between the rocks off Tong Kwa peninsula and those NE of the NE end of Shangchuang Dao. The S entrance leads to the W of the islands off the E coast of Hsia-ch'uan Shan on the W and the W coast of Shangchuang Dao on the E. Depths of 9.2m shoaling to 5.5m are found in this latter approach channel.

Tides—Currents.—The flood current sets N and the ebb S through the S approach channel. They are strongest at springs.

Anchorage.—Anchoring is possible in this passage, which has a soft bottom.

Vessels can anchor, in 9 to 11m, soft bottom, in the S part of the S approach to San-hsia Kou. Anchorage can also be taken in 4.3m, soft mud, between the SE coast of Hsia-ch'uan Shan and **P'ing Chou** (21°36'N., 112°39'E.).

The W and SW approaches to San-hsia Kou which lead N of Mang Zhou across the mouth of Pei-hai Wan and SW of Mang Zhou along the NW coast of Hsia-ch'uan Shan, respectively, have not been adequately surveyed.

Mang Zhou (21°40'N., 112°27'E.), an irregularly-shaped, grass-covered island, 304m high, lies close within the 5m curve about 4 miles SSE of the W entrance point of Pei-hai Wan. A village, visible from SE, stands near the summit of the island and a rock, 9m high, lies about 0.8 mile S of Mang Zhou. Shoal ground, on which there are some rocks, extends about 1.5 miles NE and E from the NE side of the island.

The coast between the SW extremity and Tong Kwa peninsula and T'an Wan, 29 miles WSW, is mountainous,

rugged, and irregular. The many bays formed by the indentations of the coast have not been closely examined. Kuang-hai Wan, at the head of a bay 11 miles N of Shangchuang Dao, is a supply center for fishing craft. A fishing harbor with a shipyard for repair and construction of fishing craft is established.

The mouth of **T'an Wan** (21°44'N., 112°08'E.) is 13 miles across. Mo-yang Chiang, a river with a rather large delta, flows into the bay in its NW part. The main entrance to the river lies between two forts about 0.5 mile apart. Local knowledge is required to enter this bay as it is shallow, rock-strewn, and relatively unexamined.

Mud flats extend a considerable distance off this entire portion of the coast.

Off-lying Islands

3.6 Dongdahan Shi (Tung-fan Shih) (21°27'N., 112°22'E.), a barren white rock, 61m high, and appearing as a junk with one sail, lies farthest offshore of the islands in this portion of the sector. It has a steep summit and is prominent. Tung-hsiao-fan Shih, a high rock, lies 0.5 mile N of Dongdahan Shi and a rock awash lies between the two islets.

Explosives grounds, with reported depths of 24m and 25m, lie approximately 1.5 miles W and 1.2 miles SSE of Dongdahan Shi.

Nanpeng Dao (Nan-P'eng) over 244m high near its W end, is located 12 miles WNW of Dongdahan Shi. Huangchengshan, a rounded islet, lies 3.8 miles W of Nanpeng Shi. Breakers have been reported on the shoal S of the island and in the area of two above-water rocks lying 1.8 miles SW of Huangchengshan.

Enhao (Erh-huo), a rocky islet, 148m high, lies 4 miles NNW of Nanpeng Dao. Sunken rocks lie close off its W and SE ends and a rocky islet lies between it and Li-t'ou-t'ieh, about 1 mile E.

Dahuo (Ta-huo) (21°39'N., 112°07'E.), 129m high, lies in about the middle of the mouth of T'an Wan. It appears as a saddle when viewed from the SW. A rock awash lies about 1 mile SW of this island.

3.7 Hailingshan Dao (Hai-ling-shan Tao) (21°38'N., 111°54'E.) is a rather large, mountainous island whose N side forms the SW side of T'an Wan as well as the SE side of Yang-pien Hai. The waters N of the island have not been closely examined. Near the center, is the island's summit, Sugar Loaf, which is over 400m high.

The SW extremity of the island is a low, sandy point with a drying sand bank extending SW from it for about 0.5 mile. Two islets with numerous sunken rocks around them lie on this bank. The S coast of the island extends about 13 miles ENE and is slightly indented. Reefs, shoals, and drying flats extend off this coast from about 2.5 miles E of the SW end up to the E extremity, Hailingshan Dao, which is marked by a 223m high hill and a red patch of sand visible from SE.

Hailingshan Gang (Hai-ling-shan Chiang) (21°45'N., 111°39'E.) is a bay of moderate depth, encumbered by shoals, lying between the W side of Hailingshan Dao, and the mainland to the W.

Winds—Weather.—Southwest winds predominate in summer, when rainstorms are frequent. Northeast winds predominate in winter, when fog is prevalent. Northeast winds are usually experienced during the approach of a typhoon.

Tides—Currents.—The tide sets NE on the rising tide at a rate of 1.3 knots and SW on the falling tide at a rate of 2.5 knots.

Pilotage.—Pilots board 1 mile SW of Mawei Zhou.

Anchorage.—The anchorage is sheltered from NE, E, and SE winds, but during NW and N winds, considerable swell is experienced. Vessels wishing to use this anchorage should obtain permission from the proper authorities well in advance. Local knowledge is essential for this anchorage.

A quarantine anchorage and a designated anchorage have been established 1 mile SW and 2.5 miles WSW respectively, from Mawei Zhou.

3.8 Shuangshan Dao (Shuang Shan) (21°33'N., 111°41'E.) is comprised of two islets, 64m high, that lie in the SW of a bay indenting the coast to the W of Hailingshan Dao. A rocky spit, extending E from the mainland, encloses and extends beyond these islets. The Rugged Mountains, which attain a height of nearly 914m, lie inland in this vicinity.

The coast, from Shungyu Zui (Shuang-yu Tsui), a low, sandy point about 3.2 miles SW of Shuangshan Dao, to the mouth of Shui-lung Chiang, 31 miles W, is very irregular and fringed by offshore reefs and islets. Most of this coastline has not been closely examined and mariners should remain well offshore. Continuing W and WSW to the Huang-p'o Chiang, a distance of about 30 miles, the coast is low and relatively regular, but incompletely surveyed. Vessels should give this coast a wide berth.

A pinnacle-shaped feature on Shuangyu Zui, 38m high, is reported to be prominent. A reef, with some rocky islets on it, extends 1.3 miles SW from this point. The entrance to the narrow inlet N of this reef is foul.

Qing Zhou (Ch'ing Chou) (21°29'N., 111°28'E.), 126m high and covered with bushes and grass, is located 2 miles S of a rocky peninsula which marks the E entrance of a bay. Depths of 7.3 to 11m are found in the unobstructed sections of the outer part of this bay, but the inner part is mostly shallow.

3.9 Xiaozhu Zhou (Ta-chu Chou) (21°26'N., 111°22'E.), 87m high, lies 0.5 mile NNE of Dazhu Zhou and foul ground extends 1.8 miles farther NNE. Reefs and rocks are found N, NW, S, and SW of Qing Zhou and N and NE of Xiaozhu Zhou.

Anchorage in 7.3 to 11m, fine sand, can be taken about 0.5 mile or more W of the latter island. The anchorage is exposed to the Southwest Monsoon, but offers some protection from the Northeast Monsoon.

The coast immediately N of the above anchorage trends N to SW and terminates at its SW end in a triangular-shaped peninsula called Lien-t'ou. The NE end of the peninsula is joined to the mainland by a sandy isthmus. The S side of Lien-t'ou is hilly and has a rounded appearance from the E. Sie Ho Point, the S extremity of the peninsula, is located about 2.5 miles SSE of its N extremity.

Caution.—An SBM lies about 5.5 miles SE of Xiaozhu Zhou. A submarine oil pipeline extends 8 miles NW from the

SBM to the coast. Navigation is prohibited within 1 mile of the SBM and the pipeline.

Sie Ho Reef lies about 0.5 mile off the SE side of Lien-t'ou and extends 1 to 2 miles ESE from Sie Ho Point. An above-water rock lies near its center. Po-p'i Shih, a large white rock, lies about 0.5 mile SW of the above point. A drying rock lies close W of Po-p'i Shih and a sunken rock lies about 0.5 mile off the W side of Lien-t'ou, 1 mile NW of Sie Ho Point.

Hsiao-fang-chi Tao, a very small islet, 32m high, lies 1.5 miles W of Po-p'i Shih with a sunken rock in the area between the two as well as other sunken rocks lying nearly 0.5 mile off the NW extremity of the former islet.

3.10 Dafangji Dao (Ta-fang-chi Tao) (21°23'N., 111°11'E.) rises to a height of 122m about 2 miles SW of Hsiao-fang-chi Tao. A shoal spit with a depth of 4.5m extends 1.5 miles N from the islet.

Anchorage.—Anchorage can be taken with some protection from monsoons in a depth of 11m just N of an imaginary line joining Dafangji Dao and Hsiao-fang-chi Tao. Heavy swells roll into the anchorage during the strength of the monsoons.

Caution.—Dangerous wrecks lie about 2 miles S and 6 miles SSW of Dafangji Dao.

A shallow bank extends up to 4 miles off the mainland coast to the N of the above anchorage. The E end of the bank dries. Niu-mu Shih (Black Rocks) and Hua-wen Shih (Marble Rock) lie to the W of the S end of the drying bank with the former lying 4.8 miles NW and the latter 2.3 miles N, respectively, of Hsiao-fang-chi Tao. These rocks are above-water and prominent.

3.11 Tien-pai Chiang is a small harbor located N of Lien-t'ou. It is entered through a channel leading between the above-mentioned dangers and the W side of the peninsula. The harbor is used only by junks and other small craft.

Shui-lung Chiang, another small coastal harbor used by junks and small craft, lies with its narrow entrance about 8 miles W of the entrance to Tien-pai Chiang. The coast between the two entrances is rather hilly, but has not been completely examined. Chim Shan, a white hummock, 21m high, is located midway along this coast.

Shuidong (21°29'N., 111°05'E.) is a new port opened in 1993. Vessels approach from the S using an entry and departure lane that is 5.5 miles wide and 12 miles long. Currents run parallel to the coast, in either a SW or NE direction.

A channel, 91m wide with a depth of 9.4m and marked by buoys and ranges, leads to the piers. The government general cargo berth is 189m long. There is also a private general cargo berth, 244m long. Both berths have a depth of 11m alongside. A private oil wharf has depths of 7.5 to 11.9m alongside.

Vessels with a maximum draft of 7.5m can be accommodated. Vessel transits are allowed during daylight hours only.

Pilots board in the pilot anchorage area.

Caution.—Two 4.5m shoals lie close off the pier area.

Shoal ground, as defined by the 3m curve, extends up to 4 miles off this coast. The E end of this shoal ground dries. The 20m curve is charted 6.5 miles offshore.

3.12 A narrow peninsula with its E end forming part of the W side of the entrance channel to Shui-lung Chiang, extends about 5 miles WSW to An Kang Shan. This bold cliff, 168m high, is fronted by dangerous rocks extending 4 miles farther WSW and about 1 mile offshore. Two prominent hills, 9 and 18m high, stand on the peninsula between its NE end and An Kang Shan.

Between this hill and the mouth of the Huang-p'o Chiang, about 24 miles WSW, the coast is low and has some red cliffs. A 1.8m rocky patch lies 2.5 miles offshore in a position about 11.5 miles WSW of An Kang Shan. The 20m curve is charted up to 16 miles offshore of this coast.

Huang-p'o Chiang has not been thoroughly examined. Breakers have been reported as extending 3 miles seaward of the river mouth. Ngchunyun, a small river port, lies about 5 miles within the river entrance. Light draft vessels with local knowledge can ascend the river as far as the port. A white fort (21°14'N., 110°38'E.) stands on an island on the SW side of Huang-p'o Chiang channel, and a peak, 183m high, lies 12.5 miles NNW of the fort.

The coast from the mouth of this river for about 10 miles SSW to the entrance of Zhanjiang Gang is low and sandy.

Leizhou Bandao is a large peninsula extending S from the S coast of China between the parallels of 20°13'N and 21°25'N. Its surface is undulating and deeply indented. Barren sand dunes and scattered fishing villages are found along its coasts.

The E coast of the peninsula between Huang-p'o Chiang and Caia-pei Chiao, 46 miles S, is indented by a wide bight to a distance of about 25 miles. The coasts of the bight are flat and muddy and are intersected by a number of small rivers. The islands of Lin-hai Tao and Tung-hai Tao fill the N half of this bight. The main entrance to Kuang-chou Wan, which is also the entrance to the port of Chan-chiang, leads between these two islands. The country backing Zhanjiang Gang is undulating and volcanic in origin.

The S portion of the bight is filled with shallow banks with narrow channels between them. Much of this portion of the bight is imperfectly surveyed. Rocks and reefs probably exist within 10 miles of the SE coast of the peninsula.

The S coast of Leizhou Bandao is described with Qiongzhou Haixia in [paragraph 3.26](#).

3.13 Naozhou Dao (Nao Chao) (20°54'N., 110°35'E.) is a rocky island with a barren summit, 85m high, marked by a stone lighthouse which is prominent from all directions except S. Sometimes this light is obscured by clouds. The island appears as a flattened cone from seaward and is reportedly a good radar target. Tung-pei Chiao, the NE point of the island, and Chung Chiao, about 2.8 miles SSW, provide good radar fixes. Sandhills, 12 to 15m high, stand on the N side of Naozhou Dao.

A conical tower, painted in black and white bands, stands on the N coast of the island about 0.3 mile E of Pei-ch'ing T'ou, the N extremity of the island.

The coasts of Naozhou Dao are irregular and are fringed with drying banks which extend 0.2 to 0.8 mile offshore. Foul ground consisting of sunken and drying reefs connected by sand and mud shoals, extends 1 to 6 miles seaward from the SE coast of the island. P'ang Chiao (Grand Plateau), 2.2 miles SSE

of Tung-nan Chiao, which is the SE extremity of Naozhou Dao, dries 3.6m and is the highest reef within the foul area.

Naozhou Roadstead, lying to the SE of Kuang-chou Wan, is formed by the N side of Naozhou Dao, the E side of Tung-hai Tao, and the SE side of Lin-hai Tao. The main channel through the roadstead allows vessels with a draft of about 11m to ride the tide into Kuang-chou Wan. Vessels with a draft of less than 8m can enter and leave regardless of the tide.

Kuang-chou Wan is reportedly accessible via a channel passing S and W of Naozhou Dao, but this approach is not authorized by Chinese authorities.

Longshui Ling (Wei-t'sui Ling) (21°02'N., 110°31'E.), located 9 miles NW of the summit of Naozhou Dao and 1 mile inland of the E coast of Tung-hai Tao, is 109m high and very prominent. Its dark summit is fronted by light sand. Sandhills lie between it and the coast.

Hung Shan (21°04'N., 110°32'E.), 32m high, stands 2.5 miles N of Longshui Ling and 1 mile within the S entrance point of Kuang-chou Wan. The latter is low, sandy, and rounded. The N side of the entrance is marked by several wooded hills which are prolonged toward the N by high sand dunes.

Ch'ing Ling (21°06'N., 110°33'E.), which is wooded only on its S and W sides, is the most conspicuous of these hills. It is 0.7 mile inland and shows a light, close to the W of which is a prominent white house.

Caution.—During the Northeast Monsoon, the seas break over the shoal ground that extends SE from the SE end of Lin-hai Tao and E from the NE end of Tung-hai Tao.

The coastal area S of Naozhou Dao, for a distance of about 22 miles to the N limit of the mined area in the E entrance to Qiongzhou Haixia, is unsurveyed, and is probably dangerous due to reefs and shoals.

Dangerous wrecks lie 11 miles S and SSE and 2 miles SSW of Naozhou Dao.

Zhanjiang Gang

3.14 Zhanjiang Gang (Kuang-Chou Wan), a rather large bay, is 6.5 miles long in an ESE-WNW direction. It is 5.5 miles wide within its entrance. The navigable portion is reduced to a comparatively narrow channel which in some places is only 0.2 mile wide between the shoals with which it is encumbered. The entrance channel of the bay is about 1 mile wide between the narrow drying banks which fringe the coast on either side.

The channel bottom for its entire length is of mud and sand. The shores of the bay are low, sandy, and fronted nearly everywhere by banks of soft, drying mud. There are, however, some red cliffs and some clumps of trees which shelter villages along the shores of the bay.

Pilotage.—See the port description for Zhanjiang.

Regulations.—Vessels wishing to navigate within Chinese waters should obtain the permission of the proper authorities well in advance.

The Maxie He Chiang enters Kuang-chou Wan in its N part abreast the island of Ta-ch'ing Tao.

3.15 Islands in Zhanjiang Gang.—Dongtoushan Dao (Tung-T'ou Shan) (21°06'N., 110°24'E.), a rather large island,

lies in the SW part of the bay. There is a prominent white, cone-shaped beacon on the SE end of the island. A narrow and foul channel separates the S side of Dongtoushan Dao from Yuan Chiao, a point on the N end of Donghai Dao. The N and E sides of the island are fronted by banks of rock and mud.

Teching Dao (Ta-ch'ing Tao) (21°09'N., 110°25'E.) is about the same size as Tung-t'ou Shan, but is more regular in shape and lies 3.2 miles N. It lies on the E side of the main channel close E of the tanker piers. The island is cultivated and supports some villages. Hsi Chiao is the W extremity of Teching Dao. A drying bank extends 1.2 miles SE of the island.

The tidal currents in the entrance of Zhanjiang Gang sometimes attain a rate of over 4 knots. They flow in the general direction of the channel. However, seaward of the entrance, particular care should be given to the set of lateral currents during the Northeast Monsoon. These crosscurrents have been reported to reach velocities of 8 knots.

Within the bay the tidal currents follow the general direction of the main channel, except near the N end of Dongtoushan Dao where the flood continues to set W into the channel off the NW side of this island and the ebb sets in an opposite direction.

To the N of Dongtoushan Dao the tidal currents return to the main channel directions. Velocities range from 1.2 to 2.5 knots on the flood and reach 0.5 knot on the ebb.

3.16 Zhanjiang Gang Entrance Channel.—From seaward, the entrance channel has a least reported depth of 9.2m, but the range line passes close aboard shoal patches, an obstruction, and across a 7.5m shoal patch charted 5.8 miles N of the range lights on Naozhou Dao. The fairway passes N of Naozhou Dao, between Nansan Dao and Donghai Dao, and through the estuary to the port of Zhanjiang.

Several secondary channels exist in Zhanjiang Gang, but should only be attempted by vessels with local knowledge.

3.17 North Side of Kuang-chou Wan.—This shore, lying NW of Lin Shan, is low and swampy. Chintzu Chiao, located 4 miles NW of Lin Shan, is formed by red cliffs. Banks formed of sand, mud, and rocks, some of which dry as much as 3.7m, extend from the shore S to the fairway. These banks are charted.

3.18 South Side of Kuang-chou Wan.—This side of the bay begins with a low, sandy point at the NE part of Donghai Dao. The shore to the SW, for a distance of 2.5 miles, consists of broken cliffs up to 20m high. There are patches of rock along the shore. The coast is then low and sandy as far as Yuan Chiao, where it again rises to a low cliff.

The shoal ground and drying banks that front the N coast of Donghai Dao force the main channel to a nearly NW-SE direction. Fishing stakes may be found on these banks.

A rocky shoal forms the SW side of the fairway of the main channel about 1 mile to the N of Dongtoushan Dao. In this vicinity, the channel is about 0.3 mile wide.

3.19 West Side of Kuang-chou Wan.—The W side of the bay from Shitou Jiao extends SW. A sandbank, which dries and has several scattered drying rocks on it, extends offshore forming the NW side of a side channel and the W side of the

main channel. Fisher's Rock, which dries 4m, lies 2 miles SSW of Shitou Jiao.

Shitou Jiao (21°09'N., 110°23'E.) can be identified by the oil tanks at the foot of the main tanker jetty extending from it.

Caution.—Vessels should have little trouble as long as they stay in the main channel and adhere to the guidance of the pilot when moving off the range lines or out of the buoyed passages. Most turns and dangers near the fairway are marked by buoys and can be cleared by staying on the ranges.

Fishing stakes are found bordering the main channel in various locations along its routes.

Zhanjiang (21°12'N., 110°24'E.)

World Port Index No. 57770

3.20 The port of Zhanjiang (Chan-Chiang) is situated at the NE part of Leizhou Peninsula of Guangdong Province, on the W bank of Maxie He Chiang (Wu-li-shan Chiang).

The port is protected against typhoons, but during the Northeast Monsoon, conditions caused by strong onshore winds can be difficult. The inability of a pilot to berth a vessel during this period can cause considerable delays. However, this deep water port handles much of the trade of southern China and it also serves as a base for offshore oil drilling and deep sea fishing industry.

Winds—Weather.—The port has a subtropical climate with long, hot summers and short winters.

Winds follow the patterns of the Northeast Monsoon and Southwest Monsoon. In summer, winds from E and SE prevail while in winter they are NW through N to NE. Rainfall is heavy from May to September.

Typhoons strike the port most frequently between July and November and bring winds reaching force 8 to 12 on the Beaufort Scale. Although the harbor provides shelter during these storms, cargo operations are often interrupted.

Fog occurs frequently between dawn and mid-morning during winter and spring. The fog is infrequently dense however, and does not affect aviation or cargo operations to any great extent. There is little fog in summer and autumn.

Tides—Currents.—The tides within the port are semidiurnal, but irregular. They rise 3.8m at springs and 2.9m at neaps.

Off Zhanjiang, the tidal current on the rise flows roughly NW following the channel at a rate of 1.2 to 2.5 knots. It begins 2.5 hours after LW at Naozhou Dao. When falling, the direction is SE beginning 1 hour 12 minutes after HW at Naozhou Dao. The velocity on the fall is between 0.5 and 1.5 knots.

Depths—Limitations.—Vessels of up to 70,000 dwt can be accommodated at the port. The port is divided into three working areas totalling 2,767m of wharfage. The majority of the berths, 23 of the 29, are deepwater berths for vessels exceeding 10,000 tons. There are an additional 18 anchorage berths in depths of 13 to 34m.

Nine berths in Area No. 1 have alongside depths of 10.9m and can accommodate vessels of up to 10,000 tons. Two berths in Area No. 2 can accommodate vessels of up to 35,000 tons.

There is a petroleum jetty with a 100,000 ton capacity and an alongside depth of 11.9m; four vessels of 25,000 to 50,000

tons can be berthed at the pier. There are two container berths able to accommodate vessels of up to 15,000 dwt.

The controlling depth of the approach channel is 11m at HW and 9.5m at LW. The maximum permitted drafts are:

Bulk carriers	10.4m
General cargo vessels	9.2m
Tankers	11.7m

It has been reported (1987) that cargo vessels having a draft of 11 to 11.5m can be accepted.

The general cargo area is situated 1 mile N of the oil jetty. There are 14 berths here and a ro-ro camber for local ferries.

A bulk terminal capable of handling coal, ore, grain, or phosphate vessels of up to 35,000 dwt, is situated 1 mile N of the oil pier. It is approached by a narrow channel.

Aspect.—When entering the port proper, the oil tanks and the piers of the petroleum complex are conspicuous on the W bank of the Maxie He Chiang. Two breakwaters, parallel to each other and to the tanker jetty, extend E from shore close N of the N tanker berth which extends N from the main jetty.

Shoal ground and drying banks extend into the river from both shores. Some drying and above-water rocks stand on these banks. Vessels are, therefore, advised to stay to mid-channel unless directed otherwise by the pilot.

Alouette Bank (21°11'N., 110°24'E.) a rocky shoal that dries less than 0.3m at its S end, lies on the NW side of the fairway, 1 mile SSW of Tung-ying Chiao. A 1.5m patch lying at the end of a foul bank, lies 1.5 mile SW of Alouette Bank.

Zhanjiang Gang Light Vessel (20°56.0'N., 110°40.3'E.) marks the S limit to ZhangJiang Harbor.

Pilotage.—Pilotage is compulsory, and should be ordered through the Harbormaster, Zhanjiang, at least 24 hours in

advance of the vessel's arrival. Vessels should indicate which pilot anchorage they intend to use when ordering the pilot.

The pilot will board inbound vessels at the First or Second Pilot Anchorage depending on draft and familiarity with the port. The First Pilot Anchorage is used by vessels lacking local knowledge and/or entering with drafts in excess of 9.1m. Vessels drawing less than 9.1m and in possession of local knowledge may board the pilot at the Second Pilot Anchorage, which is also the quarantine anchorage. Both anchorages are best seen on the appropriate chart.

Regulations.—Port officials will board with the pilot.

Signals.—A signal and lookout station with a signal mast is situated close inshore about halfway between the root of the Shih-t'ou petroleum jetty and the S end of the main cargo wharf. Strong wind and storm signals are shown in the accompanying table.

Anchorage.—The outermost anchorage, First Pilot Anchorage, is situated at the intersection of Longshuiling Hangdao and Doulongoun Beighangdao leading tracks. The holding ground is good in soft mud, but the anchorage is exposed to the Northeast Monsoon. Alternatively, most vessels embark pilots at Second Pilot Anchorage, which also has good holding ground; this anchorage lies off the N side of the fairway, at the intersection of the Entrance Channel and Nansandao Xihangdao Channel. A yellow lighted buoy marks the shoal limit NE of the anchorage. Vessels with a maximum draft of 10.3m can use Second Pilot Anchorage.

There are 19 anchor berths, in depths of 13 to 34m, designated by the harbormaster, most of them with good holding ground, sand and mud. However, mariners should note the 1.6m shoal within the Oil Tanker Anchorage lying 1 mile E of the bulk terminal.

Zhanjiang—Strong Wind and Storm Signals		
Day signal	Night signal (All lights are disposed vertically)	Meaning
Winds not associated with a typhoon		
Cylinder, disposed vertically	Two green lights	Winds over force 6-7 within 6 hours
Diamond, disposed vertically	One red light over one green light	Winds over force 8 within 24 hours
Winds associated with a typhoon		
T-shape	Three white lights	Tropical storm within 48 hours
Ball	One white light over one green light over one white light	Winds force 6-7 within 24 hours
Cone, point up	One white lights over two green lights	Winds over force 8 within 12 hours
Two cones, points together	Three green lights	Storm force winds not exceeding force 12 within 12 hours
Cross	One red light over one green light over one red light	Typhoon

Anchor berths No. 17, No. 18, and No. 19 lie on the N side of the Entrance Channel off the SW extremity of Nansan Dao. There are several anchorages for tankers, situated 1 mile S of **Shai Wei** (21°09.5'N., 110°25.0'E.), and 1.5 miles NNE of the same point.

Anchorage is prohibited in the cable area NE of the city.

There are a number of mooring buoys for use by vessels of 10,000 tons during typhoons.

Directions.—Approach Naozhou Dao from the E, keeping **Doulong Cun** (20°56'N., 110°38'E.) leading lighted beacons in line bearing 270° and passing N of Lighted Buoy No. 1 Lighted Buoy (Fairway), alter course to head for Longshui Ling leading lighted beacons in line 303°45'. If the leading beacons are unrecognizable, then steer for Longshui Ling summit bearing 299°; however, a W set towards Naozhou Dao is usually encountered on this leg. The dark summit fronted by light sand is unmistakable, and sometimes appears to rise from the clouds. A vessel choosing First Pilot Anchorage should use the N section of the anchorage area during the Northeast Monsoon, and the W section when anchoring with a flood tide.

A vessel proceeding to cross the bar continues on the above course and from First Pilot Anchorage area brings Doulong Cun lighted beacons in line bearing 167° astern when steering on 347°. This course should lead a vessel through the bar, between lighted buoys until about 4 miles from Nasan Dao front range light, when course should be altered to 325° in alignment with Nansan Dao leading lighted beacons.

A regular mid-channel dredging operation is conducted to maintain a least depth of 9m in Doulongcun Beihangdao channel bar (in the vicinity between Lighted Buoy No. 2 and Lighted Buoy No. 3). An obstruction lies about 0.2 mile NNW of Lighted Buoy No. 2 with a 6.5m depth above it; another shoal, with a depth of 7.3m, lies on the W limit of the channel and 4.7 miles SSE of Nasan Dao front range light.

When Hou Ling bears 259°, or at night when Longshui Ling front range light changes from red to white, alter course to 284°30' and proceed through the entrance channel.

There are three anchorage berths, lying midway between the 10m contour S of Nansan Dao and mid-channel. The Second Pilot Anchorage lies 0.5 mile W of the westernmost anchoring berth. Fishing stakes are usually encountered on both sides of this channel; a dangerous wreck lies about 0.2 mile ESE of Lighted Buoy No. 10

Caution.—In 1993, lesser depths than charted were reported in the entrance channel and adjacent waters. Mariners should also note the dangerous wrecks, best seen on the chart, within this part of the approach.

Some of the range lights within the port may be obscured by trees. Vessels may experience considerable scend in the shallowest part of the channel. Fishing piles encumber both sides of the fairway.

Mariners should exercise caution due to numerous charted obstructions and dangers between Zhangjiang Gang and Hailingshan Gang, some lying up to 70 miles offshore.

3.21 Maxie He Chiang, above Zhanjiang, maintains its width and deep-draft navigability as far N as the island of Diaoshun Dao, a distance of about 6 miles. To the N of this island, the river is traversed by smaller vessels with local

knowledge and junks as far as the village of **Shih-men** (21°24'N., 110°22'E.).

West bank.—Between Zhanjiang and **Ping-lo T'ou** (21°14'N., 110°24'E.), 2 miles NNE, the shore is indented about 0.5 mile by a mangrove-fringed bight. The bight, which is encumbered with fishing stakes, is filled with drying mud flats.

Bonheur Tower, which is prominent, stands near the shore 1 mile NNW of the N piers at Zhanjiang. Between the tower and Ping-lo T'ou, there are two prominent hills, 12m high, standing close together. Ping-lo T'ou is the E extremity of a range of hills. Nearly the entire W shore is fronted by mud flats that dry.

A chimney stands on the coast near the NW end of Pese Cliffs which begin about 2.5 miles NW of Ping-lo T'ou and extend NW. A black and white banded square tower, 7m high, stands 0.5 mile NW of the chimney. Another chimney stands close SE of the tower.

Due N of Pese Cliffs lies the island of Diaoshun Dao. An extensive flat lies between the W side of the island and the mainland to the W. A causeway extends to the SW end of the island from the vicinity of the above mentioned black and white tower. Another causeway joins the N end of the island with the mainland to the N.

A rocky shoal, with depths of 1.2m to 1.8m at its outer end, extends about 1 mile SSE from the S end of Diaoshun Dao.

A steelworks has been built on Diaoshun Dao. There is a 2,000m long quay on the SE end of the island, at which there are five berths with alongside depths of 9.1m. A bulk loading berth lies at the NE end of the quay.

Anchorage can be taken in the river in a position about 1.3 miles SE of the SE end of the island.

3.22 Between **Tung-ying Chiao** (21°12'N., 110°25'E.), which is rather steep-to, and a point 2 miles NE, the E side of the Maxie He Chiang consists of low and level cliffs. Inland there is cultivation, and several villages lie hidden by trees. A naval installation extends N from the point. A drying bank fringes the shore N of Tung-ying Chiao and fishing stakes are sometimes found on the banks.

Between the point located 2 miles NNE of Tung-ying Chiao and Point Tumulus, about 1.5 miles NNW, there is a bight, most of which dries. A hill, 9m high, stands on Point Tumulus.

A sandbank lies about 1.5 miles NNW of this point, about 0.3 mile offshore. A drying rock lies about 0.3 mile SW of the S end of the sandbank.

Between Point Tumulus and Chenal de Potao about 2.2 miles N, the E side of the river is bordered by mangroves. Mud flats, which dry, extend up to 0.3 mile offshore and generally fringe the coast N to Shih-men.

3.23 **Leizhou Bandao (continued).**—Hsi-nan Hang-men is a partially unsurveyed and unmarked channel which leads S of Nao Chao and Tung-hai Tao and NE of Leizhou Bandao. The channel is entered from the SE between the foul ground off the SE of Nao Chao, which is nearly always visible during daylight hours, and the banks off to the E of the peninsula. The entrance is 3 miles wide.

Caution.—Hsi-nan Hang-men and the branch channels leading from it are used only under favorable conditions by vessels with local knowledge, most of which are also light

draft. Although the channels are described here in general, due to their unsurveyed nature and Chinese regulations governing territorial waters, their use is not recommended.

Chi-moa Sha (20°51'N., 110°31'E.) is an extensive bank which nearly dries and forms the S side of Hsi-nan Hang-men. Near the SE end of this bank, a branch channel, Tung-pei Hang-men, leads to the NE between Naozhou Dao and the reefs and foul ground to the SE. The entrance, between two 1.8m patches and the channel, lies SE of Naozhou Dao Roadstead in the approaches to Kuang-chou Wan. This channel should be attempted only at LW when the dangers are most visible.

3.24 Nao-chou-hsi-pei Hang-men, a channel connecting the inner part of Hsi-nan Hang-men with the approach to Kuang-chou Wan, leads along the W and NW sides of Naozhou Dao. It is entered from S between Hsi-nan T'an and Ma-ti T'an where there is a least depth of 5.3m over a width of 0.5 mile in the fairway. The channel narrows to about 0.25 mile within the entrance for a good part of its length as it leads between the banks of Kan-hsin T'an and Hsi-pei T'an.

Swathway Channel, with a least depth of 2.8m in the fairway, lies between Kan-hsin T'an and the shoal ground fringing the SE side of Tung-hai Tao.

Mandarin Bay is entered at the NW head of Hsi-nan Hang-men. This bay fills the bight on the S of Tung-hai Tao and on the E of Leizhou Bandao. The shores of the bay dry nearly all around. However, a narrow channel does lead from its W part, N along the W coast of Tung-hai Tao and into Kuang-chou Wan. A river enters the SW corner of the bay, but access to it is shoal.

Tides—Currents.—The tidal currents are divided by Naozhou Dao. One current passes N of the island and the other S. In Nao-chou-hsi-pei Hang-men the tidal currents attain a rate of 2.5 knots at springs, changing about 1 hour after high and low water. The set is to the S on the rising tide and to the N on the falling tide. The flood current setting NW through Hsin-nan Hang-men meets the flood current setting S through Nao-chou-hsi-pei Hang-men in the channel abreast of Tan-shui; they separate at the same spot.

To the SW of Chi-mao Sha, the coast of Leizhou Bandao (Lei-chou Pan-tao) between **Pei-kou-keng Chiao** (20°51'N., 110°20'E.) and Malu about 18 miles SSE, is low, irregular, and indented by shallow creeks. The coast has not been thoroughly examined and shoal banks extend as far as 18 miles offshore.

3.25 Malu (20°35'N., 110°28'E.), a small port, stands on the S side of Wai-lo-pou Chiang. Between this port and Chia-pei Chiao, 8 miles SSE, the coast consists of sand hills.

Off the entrance of Ma-lu, the tidal currents set strongly across the channel on both sides. The maximum rate of the current is reported as 2.5 knots.

Chia-pei Chiao (Nui-pi Chiao) (Gopai Point) (20°29'N., 110°32'E.), the NE entrance point of Qiongzhou Haixia, forms the E extremity of Leizhou Bandao. The point is low and is backed by sand hills rising to heights of 21 to 24m. A mound, 48m high, lies 3 miles SSW of Chia-pei Chiao.

Hei Chiao (Black Rocks) (20°30'N., 110°32'E.) which dry 1.2m, are located about 1.5 miles NNE of Chia-pei Chiao. A shoal that dries in places lies 3 miles E of the same point.

Caution.—The N limit of a mined area lies at the E end of Qiongzhou Haixia and extends E about 32 miles from Hei-chiao; the area then extends along the inner route close off Leizhou Bandao to the S of Hei-chiao and could be dangerous.

Qiongzhou Haixia

3.26 The S side of Leizhou Bandao forms the N side of Qiongzhou Haixia and the N coast of Hainan Dao (Hai-nan Tao) forms the S side of the strait. The waterway has a least width of about 10 miles between the peninsula and the island and is about 47 miles long. The E limit of the strait is defined as a line drawn from **Mulan Tou Light** (20°09'42"N., 110°41'06"E.) in a 320° direction to Leizhou Bandao in the vicinity of Shanzhu Ling. The W limit is a line drawn between **Lingao Jiao** (Lin-cao Chiao) **Light** (20°00'42"N., 109°42'36"E.) and **Jiaowei Jiao** (Chiao-Wei Chiao) **Light** (20°13'20"N., 109°55'12"E.), from which a racon is transmitted.

Depths—Limitations.—Rocks and shoals lie in the approaches to the E and W entrances of the strait, with the E entrance being far more encumbered with dangers than the W. The offshore approaches to the S coast of the peninsula and to the N coast of the island within the strait are mostly clear. The inshore approaches, however, are obstructed in many places. Fringing reefs are prevalent in some of the bays indenting the peninsula and along many parts of the N coast of Hainan Dao.

Both coasts bordering Qiongzhou Haixia share a similar aspect. They are indented by many bays separated by capes and points of varying configuration. The heads of these bays are mostly shoal and some are bordered by mud and sand flats. Some have detached dangers and others have lagoons extending inland from them.

The coast is fronted predominantly by sandy beaches although, there are short stretches of cliffs with scattered rocky points. In most places the coast is backed by low sand dunes and sand hills covered with scrub growth. Scattered palms and other trees grow near the coast while a wide coastal plain extends inland. This low rolling plain is broken in places by isolated hills rising between 91m and 244m.

The streams which discharge into the sea are navigable only by small, native craft.

Haikou is the only commercial port of importance within the strait. It lies on the N coast of Hainan Dao about midway through the strait.

Regulations.—The Chinese government issued the following regulations on 8 June 1964 which govern the passage of nonmilitary, foreign registered vessels through Qiongzhou Haixia.

Based on the "Declaration of the Government of the People's Republic of China Concerning Territorial Waters," Qiongzhou Haixia is considered inland waters. Passage is prohibited to foreign military vessels. If passage is necessary for nonmilitary vessels of foreign registry, application for authorization to transit the strait should be made in accordance with these regulations.

For the purpose of facilitating control over Qiongzhou Haixia, the "Qiongzhou Haixia Administration of the People's Republic of China" (hereafter called the Qiongzhou Haixia Administration) is established.



Qiongzhou Haixia

The Administrative Area of Qiongzhou Haixia (hereafter called the "Administrative Area") is tentatively designated as the waters W of a line between Mulan Tou Light and Shanzhu Ling, 19 miles NNW (hereafter called the "E limit"), and E of a line between Jiaowei Jiao Light and Lingao Jiao Light, 17.5 miles SW (hereafter called the "W limit").

If it is necessary for nonmilitary vessels to transit the strait, they should execute the following procedures:

Forty-eight hours prior to entering the Administrative Area or prior to sailing from the port of departure, the vessel shall communicate by cable the following to the Qiongzhou Haixia Administration:

1. Vessel's name.
2. Nationality.
3. Gross tonnage.
4. Speed.

5. Color of hull.

6. Description of funnel.

7. Date and time due to sail from current port of call or date and time of sailing from last port and port of destination, and request for authorization to pass through the strait.

Upon receipt of authorization to pass through the strait, and 24 hours prior to entering the Administrative Area or within 2 hours of sailing the port of departure, the vessel shall report to the Qiongzhou Haixia Administration the exact time of entry into the Administrative Area.

Note.—The above telegraphic communication requesting authorization to pass through the strait shall be sent to PENAVICO HAIKOU through Haikou (XSR), for the Qiongzhou Haixia Authority. Authorization or refusal to grant transit will be received via this agent.

The Qiongzhou Haixia Administration may, on short notice, withdraw permission for a vessel to transit the strait if it deems necessary.

Passage through the Administrative Area is restricted to daylight hours only. That is, the vessel shall enter the Administrative Area after sunrise and complete its passage out of the Administrative Area before sunset. The Qiongzhou Haixia Administration approves the specific time of entry and exit from the strait on the basis of the rate of speed of the vessel requesting authorization to pass through the strait.

Vessels authorized to transit the strait shall do so in mid-channel unless given special permission by the Qiongzhou Haixia Administration to deviate from the prescribed route.

When passing through the Administrative Area, vessels shall remain N of a line extending from a point on the E limit, 4 miles from Mulan Tou Light, to a point on the W limit, 4 miles from Linago Jiao Light, and S of a line from a point on the E limit, 6 miles from Mulan Tou Light, to a point 4 miles distant and bearing 180° from **Paiwei Jiao Light** (20°15'N., 110°17'E.), then to a point on the W limit, 14 miles from Lingao Jiao Light.

When passing through Qiongzhou Haixia the vessel should adhere strictly to the reported time schedule and remain within the stipulated navigational area. Upon entry into the Administrative Area or while proceeding through the strait, if signals originating from the bank or from a naval vessel are sighted, the transiting vessel shall reply immediately and comply with the request conveyed by the signals. Consequences for failure to comply with the regulation shall rest solely with the transiting vessel.

When passing through Qiongzhou Haixia the vessel may not operate its radar, take photographs, conduct surveys or engage in acts contrary to the laws of the People's Republic of China. If in the course of navigation, conditions such as dense fog or a storm are encountered which severely restrict visibility and necessitate the use of radar, the vessel involved shall submit a report to the Qiongzhou Haixia Administration stating the reasons for wishing to operate its radar and the vessel's present position and speed. Not until approval is given may the vessel operate its radar. If at that time conditions are critical and the ship's navigational safety is endangered, it may submit a report of the circumstances and operate its radar immediately and afterward send a detailed report to the Qiongzhou Haixia Administration for its records showing the time that the radar was used and describing the circumstances and events concerning its operation.

A non-military vessel which violates these regulations shall be treated as follows:

1. Prior to its entry into the Administrative Area, the vessel may be ordered to desist from entering the Administrative Area, reverse its course, and sail around Hainan Dao, or wait until it has satisfactorily completed formalities to pass through the strait and receive approval before resuming its passage.

2. If the vessel has already entered the Administrative Area, it may be ordered to heave-to, be escorted to the port of Haikou for an inspection to be conducted, and be penalized in accordance with the findings of the inspection. After the inspection or delay, depending on circumstances,

the vessel may be allowed to transit the Administrative Area, or may be ordered to leave the Administrative Area, in which case it will be escorted out of the strait under guard.

It should be clearly understood that the publication of the above regulations is solely for information relative to the navigational safety of shipping, and in no way constitutes a legal recognition by the United States of the international validity of any rule, regulation, or proclamation so published.

Additional cautionary notes and regulations concerning navigation in the vicinity of China's coastline are found in [paragraph 1.1](#), [paragraph 1.2](#), and [paragraph 2.1](#), as well as in Pub. 120, Sailing Directions (Planning Guide) Pacific Ocean and Southeast Asia.

Caution.—Although, the hydrography in the E entrance and approach to Qiongzhou Haixia seems to offer many usable channels between the various shoals and banks, the entire area is reported to be mined. However, a channel has been swept for use on a risk-acceptable basis and presents the best route through the shoals. The channel is buoyed and begins at Buoy No. 1 (21°15'30"N., 111°05'00"E.) and leads through Chung Shui-Tao passage.

A smaller minefield is reported to obstruct the W approaches to the strait. For details of the limits of both mined areas and the buoyed channel through the E area, see the appropriate Planning Guide volume.

Tide rips exist throughout the strait, particularly abreast Mulan Tou. Some of these rips have the appearance of shoals and are discolored by vegetable matter. When the currents set W in the vicinity of Mulan Tou there is a strong set toward the reef extending from this point. Currents in this vicinity attain rates of 3 to 5 knots.

3.27 East Entrance to Qiongzhou Haixia.—The sea usually breaks on the shoal parts of the dangerous banks at the E approach to the strait during the Northeast Monsoon and when there is a swell from E. These banks extend as far as 20 miles NE from a line joining the E entrance points of the strait. Although there are deep channels between the banks, vessels should proceed with extreme caution as tidal currents are uncertain and most of the shoal heads are unmarked.

Zhong Shuidao leads between **Pei-fang Tui** (20°19'N., 110°54'E.), an extensive shoal oriented ENE-WSW with a least depth of 0.2m on its W end, and **Nau-Fang Tui** (20°12'N., 110°52'E.), another extensive shoal bank with a dangerous wreck on its NE extremity. The channel then leads S of **Hsi-fang Tui** (20°17'N., 110°40'E.), which has several dangerous sunken rocks on its SE edge, to the designated navigable area of the strait as described previously in the regulations in [paragraph 3.26](#). This middle channel is the only channel open to foreign shipping. The channel is swept through the mined area and is marked by a safe water buoy at its entrance. The rest of the channel is marked by lighted buoys. This channel is the widest and deepest channel in the E approach to Qiongzhou Haixia. Although the dangers are not all marked, the channel is considered the best channel in the approach to the strait from the E and its use is mandatory.

Caution.—The positions and characteristics of the channel buoys may be other than charted. The least charted depth in the channel is 15.8m; however, in 1961 it was reported that the depths are less than charted.

Pei shui-tao, with a least depth of 10.4m at the E part of its fairway, leads between Pei-hsi Tui on its NW side and Hsi-fang Tui and Pei-fang Tui on its S and SE sides. Several isolated shoals and detached patches with depths of 8.2 to 9.4m, lie throughout the channel, and are best seen on the appropriate chart.

The use of this channel is not recommended because the dangers are not marked, the currents are strong, the channel is not straight and the use of a channel other than Zhong Shuidao is a contravention of local regulations for foreign shipping. Additionally Pei Shui-tao traverses a reported mine danger area.

Pei-hsi Tui, with a least depth of 2m, lies with its center approximately 13 miles NNE of Mulan Tou. An extensive shoal area, which has not been thoroughly examined, lies N of this bank and extends about 12.5 miles ENE from the NE end of **Lo-t'o Sha** (20°22'N., 110°35'E.).

In general, the 20m curve lies less than 2 miles from the salient points of the N and S shores of the strait, except where bays indent the coast.

3.28 West entrance to Qiongzhou Haixia.—Several sandy banks lie in the W approach to the strait, some with shoal heads. Pei Sha is a large shoal, about 1.3 miles wide with a least depth of 5.4m, that extends about 11 miles E from a position 20 miles NE of **Bingma Jiao** (Ping-ma Chiao) (19°55'N., 109°17'E.).

In approaching the strait from the W or departing to the W, the best channel leads S of Pei Sha. Vessels should give the NW coast of the island a berth of about 5 miles to ensure avoiding the coastal bank W of **Lingao Jiao** (Lin-kao Chiao) (20°01'N., 109°43'E.). Two dangerous wreck lies 9 miles and 15 miles WNW of Lingao Jiao. Care should also be taken to avoid the wrecks lying NW of Bingma Jiao. Additionally, anchoring in the vicinity of the reported minefield in this area would not be prudent.

A shoal, with a least depth of 5.4m lies 5 miles N of the E end of Pei Sha in a position lying between 16 and 20 miles W of Jiaowei Jiao. A bank with several shoal heads extends NW from a position about 7.5 miles W of the same point. The NW shoal head lies 25 miles NW of the point and has a depth of 7m. The SE shoal head with a least depth of 8.5m, reported (1962), lies about 7 miles W of Jiaowei Jiao.

For information concerning the Gulf of Tonkin, N and W of the entrance to Qiongzhou Haxia see Sector 4. For information on the South China Sea, E of the strait, see Sector 1.

3.29 North shore of Qiongzhou Haixia.—The S coast of Leizhou Bandao forms the N shore of Qiongzhou Haixia. It extends from **Chia-pei Chiao** (20°29'N., 110°31'E.) SW about 20 miles to Paiwei Jiao, then W about 21 miles to Jiaowei Jiao.

Between Chia-pei Chiao and **Paiwei Jiao** (P'ai-wei Chiao) (20°14'N., 110°17'E.), the coast is backed mostly by sand hills between 21m and 24m high. San-kao-lung rises to 49m about 3 miles SSW of Chia-pei Chiao and along the SW part of this portion of the coast, red cliffs mark the shore.

Between Chia-pei Chiao and **Shangouhou** (Peterson Point) (20°26'N., 110°31'E.), which is reportedly marked by a light, a

fringing offshore reef extends as far as 1.8 miles offshore. About 3 miles off this shore are reefs which continue E and SE for at least 15 miles. It is on this reef, to the SE of the point, on which lies Luodou Sha.

This cay is 2.3 miles long and 2m high. Small cays lie close off the N and S ends of the main islet. Depths shoal abruptly in the approach to these cays.

The channel between Luodou Sha and the mainland is about 1 mile wide but it is fringed on both sides by reefs. It is used by small, local craft as an inner route to and from Chan-chiang, but it is not recommended for vessels without local knowledge as the area is imperfectly surveyed and governed by local regulations. The passage becomes narrow and dangerous in its N portions.

The coast SW from Shangouhou to **Hongkan Point** (20°19'N., 110°24'E.) is mostly unexamined. Hongkan Wan is a slight indentation just SW of the latter point. Foul ground extends about 1.3 miles offshore from the NE entrance point. Small vessels with local knowledge and permission can anchor in 13m, mud, with the light on the NE entrance point bearing 068° distant 1.5 miles.

Paiwei Jiao (P'ai-wei Chiao) is a fringed, sandy reef with a conical point about 24m high. To the SW of the point the coast is reef fringed and indented by Hai-an Chiang which recedes about 2 miles. Depths in the bay shoal sharply within the 20m curve which fronts the bay less than 1 mile offshore abreast the entrance points.

The head of the bay is backed by red cliffs between 15 and 18m high. Anchorage for small vessels can be taken in 9.2, mud, with the light bearing 338°, distant 1.8 miles.

3.30 Hsiao-tao Chiao (Islet Point) (20°14'N., 110°07'E.) is the E entrance point of Jiaowei Wan (Chiao-wei Wan) (Kami Bay). The mouth of the bay stretches from this point for about 12 miles W to Jiaowei Jiao.

The bay indents the coast about 4 miles, and is shoal and reef-fringed from about 0.5 to 1.8 miles offshore. The land backing the E side of the bay rises gradually to the N of Hsiao-tao Chiao. A pagoda stands on the E slope of a hill 5.5 miles NNE of the point.

Several small islets lie on the reef fringing the E entrance point.

The W side of the bay is backed by sand hills. These hills are brush-covered, but become bare towards the SW part. There are red cliffs at the central part of the head of the bay.

Jiaowei Jiao (Chiao-Wei Chiao) (20°13'N., 109°55'E.) marks both the W entrance to Jiaowei Wan and the NW entrance to Qiongzhou Haixia. It is the SW end of a 12m reef-fringed islet on which stands a light. It was reported (1965) that the high trees on the island make the lighthouse extremely difficult to distinguish. A rock, with a depth less than 1.8m, lies about 1 mile SSW of the point. Depths of less than 11m extend 2 miles SW from the point and there are rips in this area.

Small vessels can take anchorage, with some shelter from the NW, in a depth of 9.1m, mud, with Jiaowei Jiao light bearing 277°, distant 1.5 miles; and from NE winds, in 16.5m, mud, with the point bearing 128°, distant 1.5 miles.

The coast N of Jiaowei Jiao is described in [paragraph 4.3](#).

North Coast of Hainan Dao

3.31 The N coast of Hainan Dao forms the S side of Qiongzhou Haixia. The coast is very irregular, being indented by several bays. The Nan-tu Chiang delta bisects the coast.

The port of Haikou is situated at the mouth of this river. The E portions of this coast are generally sandy and low, but toward the W part cliffs intersperse the dunes. The rivers that intersect the coast are navigable only by very small craft.

Baohu Jiao (Ching-hsin Chiao) (20°01'N., 110°56'E.), marked by a racon and light, is a low sandy point rising to a height of 63m about 1.5 miles inland to the S of its extremity; a radiobeacon is situated 0.5 mile NW of the light. Baohu Shan, a black, double-peaked hill, 194m high, rises 4.5 miles SW of the point. The hills W of the point are red and those S of the point are covered with black patches. A prominent conical tomb stands on the point. A reef extends about 1 mile offshore from Baohu Jiao.

Between Baohu Jiao and Mulan Tou, 16.5 miles NW, the coast recedes about 3 miles SW and is backed by sandy hills. Shan-tou Chiao, with a reef, parts of which dry, extending about 1.3 miles NE from it, divides this large bight about midway along its length. A reef fringes the coast as far as 2 miles offshore, W from Baohu Jiao to a position about 2.5 miles SE of Shan-tou Chiao. Depths of less than 5.5m extend 2 miles N of the same point.

From a position about 3.8 miles N of Shan-tou Chou, a shoal extends NW for about 3 miles to **Magpie Rock** (20°08'N., 110°42'E.). Close NE of this rock is Riversdale Patch, with a depth of 4.5m. The patch lies on the NE end of a spit about 1.7 miles SE of Mulan Tou. There are numerous rocks and shoal heads fringing the coast in this vicinity to as far as 1 mile offshore.

Mulan Tou (20°10'N., 110°41'E.) is the N headland of the coast. A light marks the point. It is reef-fringed to a distance of 0.8 mile offshore in places. A 59m hill rises 1 mile S of this point and a 49m hill, with a conspicuous white sand cliff on its E side, rises 0.8 mile farther SE.

The tidal currents on the flood set strongly toward the reef extending N from Mulan Tou. To the W of the point they set SW into Puqian Chiang and must be allowed for. It is advisable at times to pass E and N of Nan-hsi-hsiao-tui, then W into the strait due to the set of these currents.

Offshore Dangers—Channel.—In addition to the reefs, rocks, and shoals previously mentioned, several wrecks and obstructions lie off the coast of Hainan Dao between Baohu Jiao and Mulan Tou. Their locations can best be seen on the charts.

Hainan Tou Tui, with shoals and patches which dry at low water, extends about 10 miles ESE and then irregularly about 6 miles NE from a position about 1.5 miles NE of Mulan Tou. A detached 5m shoal head is reported close off the NW end of Hainan Tou Tui, with depths of 13.2m around. The shoal heads at the NE part of this bank encumber the channel between this bank and Nanfang Qiantan.

Nan Shuidao leads between Hainan Tou and the dangers which fringe the coast SE of Mulan Tou. Although this channel is marked by buoys, it is very narrow at its NW end and the charted positions of the buoys should not be relied upon. There is a least charted depth of 12.6m in the fairway. This channel

has the advantage of leading close to the coast with navigational aids. It is considered dangerous at night or in restricted visibility and with strong tidal currents.

The channel is closed to foreign merchant ships.

Caution.—As Nan Shuidao leads into Qiongzhou Haixia from other than the required approach, its use is restricted to local vessels unless prior permission is obtained from the Chinese authorities. Extreme caution should be taken when rounding Mulan Tou, because of the numerous dangers and strong tidal currents off the point.

3.32 Puqian Jiao (20°06'N., 110°34'E.) lies 7.8 miles SW of Mulan Tou, across the mouth of Hainan Wan, a slight indentation in the coast. The shores of this bay are backed by scrub-covered sand hills between 15m and 21m high.

Anchorage can be taken in 13m, mud, about 1 mile SW of Hai-nan Yuan-yai which is a prominent, flat bluff 56m high that stands about 1 mile SW of Mulan Tao. Rocks, wrecks, and reefs make close approach to the shores of Hainan Wan dangerous without local knowledge.

Puqian Shan (Chi-hsing-ling), a hill with several summits, the highest 140m and on which stands a conspicuous pagoda, rises 1.5 miles E of Puqian Jiao.

Puqian Wan, a bight indenting the coast about 4 miles, stretches between Puqian Jiao and Pai-sha Chiao, 13 miles E, at the center of the delta of the Nan-tu Chiang. Depths within the bay are mostly less than 9m and they shoal toward its head. Fishing stakes are charted off the entrance to the bight.

A 10.1m patch, and several wrecks, along with numerous fishing stakes lie off the E entrance to the bight.

The shores are low except on the E side. The entrance to a large, shallow lagoon, used by small craft with local knowledge, lies at the SE end of the bay.

Pai-sha Tui, a dangerous shoal ridge with shoal heads having depths of as little as 0.4m, extends about 11.5 miles ENE from **Pai-sha Chiao** (20°05'N., 110°18'E.), close within the 20m curve.

Anchorage.—Exposed anchorage can be taken in a depth of 11m, mud and sand, good holding ground, about 1.5 miles W of Puqian Jiao. Small vessels can anchor in a depth of 8.2m, mud, in the W part of the bay in the lee of Pai-sha Tui with the pagoda SE of Pai-sha Chiao bearing 226° and the pagoda on the hill E of Puqian Jiao bearing 088°. The latter anchorage should be approached from the E.

Fishing stakes may be encountered as far as 2 miles N of Pai-sha Chiao and a detached 8.2m patch lies about 0.8 mile N of the same point at the W entrance to Haikou Wan.

3.33 The mouth of Haikou Wan is formed on the E by the Nan-tu Chiang delta and on the W by Chengmai Jiao, about 10 miles W. The 10m curve generally fronts the bay between these points. From here the depths shoal rapidly toward the head of the bay. The port of Haikou lies in the S part of Haikou Wan.

Several small, shallow river mouths discharge through the delta of Nan-tu Chiang, on the E side of the bay.

A cliffy ridge, 12 to 15m high, on which several conspicuous buildings are situated, rises close inland at the S side of the bay. Sand dunes, 21 to 24m high, back the SW side of Haikou Wan up to its W entrance. Xiaomao Shan, a conspicuous hill, 25m high, is located 1.5 miles E of Chengmai Jiao and Ma-an Ling

(The Hummocks), with two crater like peaks, the higher of which is 230m, rises about 8 miles S of the above hill.

Ta-lu T'an, with depths of less than 0.8m, extends NW from within the bay to a position about 1.5 miles NE of the W entrance point. Several partially exposed wrecks lie in the central part of the bay.

Haikou (20°02'N., 110°17'E.)

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3.34 Haikou is an artificial harbor situated in the S, central part of Haikou Wan. It is protected by two strengthened breakwaters and is used as a typhoon refuge. The outer harbor anchorage handles most of the foreign commerce.

Winds—Weather.—The winds affecting the port are a result of the monsoons. During the summer, they have little effect on port operations unless they result from a typhoon. In winter, the Northeast Monsoon can develop heavy seas in the anchorage area rendering cargo operations untenable. Fog occurs in winter and spring, but is usually of short duration. Violent squalls occur occasionally.

Tides—Currents.—The tropic range is 1.8m and the diurnal range is 1.3m. Tidal currents set SW into the bay for about 16 hours on the flood and NE for about 8 hours on the ebb at rates of 1.2 to 3 knots. These rates and directions are subject to change during the strength of the monsoon due to the consistency of the wind.

Depths—Limitations.—Haikou is entered through a buoyed channel with a depth of 6m in it. It was reported that the channel has a tendency to silt. Range lights lead through the channel to the harbor area.

A wharf on the E side of the harbor, having three berths can accommodate vessels of up to 5,000 dwt and up to 6m in draft. On the S side of the harbor, two piers exist with lesser depths. The majority of the cargo operations involving larger vessels, especially those of foreign registry, takes place at anchor with the use of lighters. Vessels of 25,000 dwt are handled at the anchorage.

Passenger services to Hong Kong and Guangzhou are in operation as well as a passenger and ro-ro service to Zhanjiang.

The W entrance to the harbor is much deeper than the entrance, which is used only by small craft.

Aspect.—The port of Haikou is situated on the S shore of Haikou Wan near the city of Xiuying. The city of Haikou lies 3.5 miles ENE of the port area within the delta of the Nan-tu Chiang. This city can be reached only by small, local craft.

A conspicuous white fort stands on each of the entrance points to Haikou Wan, with the shores to the E, W, and NW being mainly wooded. Several towers stand on the SE side of the bay, and a conspicuous, 47m high pagoda stands 2 miles SE of the town.

Pilotage.—Pilotage is compulsory. Pilots are met in the pilot quarantine anchorage. Pilotage is available day and night. ETA should be sent 24 hours in advance to PENAVICO (Haikou).

There is a coast radio station and a port radio station.

Regulations.—Since vessels proceeding to or from Haikou must use Qiongzhou Haixia they should comply with the regulations governing the use of the strait.

Signals.—A signal station, from which storm signals are shown is situated in the port area SW of the main wharf.

The following flags of the International Code of Signals are used:

Haikou Port Signals	
Flag	Meaning
C	Customs Officer requested
O	Stevedores requested
Q	Quarantine

Anchorage.—The Pilot and Quarantine Anchorage lies 4 miles N of the harbor area, and has depths of 15.2 to 16.4m, mud and sand. Several anchorage berths, having depths of 3.7 to 9.2m, are available, and are best seen on the chart. Northeast winds send a heavy sea into the anchorages.

Directions.—Due to the restrictions placed on foreign vessels in Chinese waters, and the compulsory nature of pilotage for this port, no directions are given. Vessels are urged to contact local authorities for the latest information on depths in the channels and anchorages of the port.

Caution.—Depths in the approach channel, the harbor basin, and the anchorages are liable to shoal. Several prohibited anchorages lie in the vicinity of the port, and are best seen on the appropriate chart.

3.35 North coast of Hainan Dao—Chengmai Jiao (20°04'N., 110°09'E.) is a low, sandy point which forms the E point of Chengmai Wan, a shoal bay indenting the coast about 4 miles. The NE part of the bay is encumbered with fish stakes to a distance of 1.5 miles offshore. Depths in the SW part of the bay shoal rapidly.

The SE shore of the bay is low and sandy from Chengmai Jiao to the pagoda 7 miles SW. The pagoda stands on the NE end of some low cliffs which extend W about 3 miles to the mouth of a shallow lagoon. Tong Sui Mun, a hill, 172m high, rises to its summit 3.5 miles ESE of the lagoon entrance. Sand dunes, 6 to 9m high, back the SW side of the bay as far as Yubao Jiao.

Caution.—An area containing unexploded ordnance is charted 2 miles NE of Yubao Jiao.

Between **Yubao Jiao** (19°59'N., 109°53'E.) and Leigong Dao, an eroded, 15m high islet lying 3.2 miles W, the coast is quite steep-to. It is faced with red cliffs, 15 to 18m high. A layer of black lava lies close under the top of the cliffs and appears as a HW mark.

Anchorage for small vessels can be taken in Maniao Chiang in 7.3m, blue clay, about 0.8 mile SSW of the small islet which lies close NW of the E entrance point. The shores of this bay are low and reef-fringed with drying flats at its head.

The bay indenting the coast between Hung-t'ao Tsui and Lingao Jiao is suitable only for small craft.

A fort stands on a spit at the SE side of the bay near a shallow inlet.

Lingao Jiao (Lin-kao Chiao) (20°01'N., 109°43'E.), which is marked by a light and a signal station, is the SW limit of the Qiongzhou Haixia Administrative Area. The point is low and

sandy and the coast, for about 11 miles WSW to T'iao-lou, is low, reef-fringed, and sandy. This portion of the island should be given a wide berth. Kao-shan Ling, 210m high, is a prominent hill rising 6 miles E of T'iao-Lou.

Bingma Jiao (Ping-ma Chiao) (19°55'N., 109°18'E.) is located 12 miles WSW of T'iao-Lou across the mouth of Houshui Wan. The point is low on its N side and cliffy on its E side. Reefs fringe the coast on either side of the point, but the 20m curve lies less than 1 mile off the point. A light is shown from a white tower on Bingma Jiao; a signal station and racon are situated at the light.

The shore of Houshui Wan is irregular and low, but several hills behind it make good landmarks. **Sun-lin Ling** (19°48'06"N., 108°25'00"E.) is a wooded, conical hill rising to 198m about 9.5 miles SE of Bingma Jiao and another hill, 212m high, rises 8.5 miles farther ESE.

The bay is reef-fringed with drying flats at its head. Linchang Dao, a large drying reef which is steep-to on its N side, lies in the center of the mouth of the bay. A low, sandy cay, 4m high, lies on the S side of the reef toward its E end.

Anchorage, sheltered in all seasons, for small vessels, with permission, can be taken in a depth of 7.3m, sand, about 1.5 miles SW of the cay.

Caution.—Care should be taken to avoid the detached drying reef lying S of the cay when approaching this anchorage from the E.

East Coast of Hainan Dao

3.36 Qizhou Leidao (Ch'i-chou Ch'un Tao) (T'a-ya Ch'un-tao) (19°56'N., 111°13'E.) is comprised of two small groups of offshore islands that lie 17 miles ESE of Baohu Jiao. The islands are high, almost inaccessible, and barren and extend in a NE-SW direction for about 8 miles.

Bei Shi (Pei-t'a-ya Tao) (Pei Shih) (19°59'N., 111°16'E.), the outermost and largest of the NE group of four islets, is 191m high. Two small islets, of which the southwesternmost is conical, lie close together about 0.7 mile SW of the large island. P'ing-shih, 114m high, lies 0.3 mile farther SW. It is the southwesternmost island of the group and the space between these latter three islets is encumbered with sunken rocks. A light is shown from Bei Shi; a racon is situated at the light.

The N islet of the SW group, Ch'ih-shih-tzu, is very small, but 52m high. It lies about 5 miles SW of Bei Shi. Nan-shih, the largest of this group and with a sunken rock and a small islet close off its N end, has three peaks, the highest 151m high.

Nan-t'a-ya Tao (Shuang-fan) (19°53'N., 111°12'E.), 99m high, with a sunken rock close off its N end, lies 1.2 miles SSE of Nan-shih and has two summits.

3.37 East Coast—Baohu Jiao to Tonggu Zui.—The coast trends regularly about 24 miles S from Baohu Jiao to Tonggu Zui, a hilly headland. It is fairly low between these two points with several streams discharging into the sea. The coast is backed by sandy ridges, 30 to 60m high, and fronted by a sand and pebble beach.

A rocky shoal area, with depths of less than 5.8m, was reported (1941) within a radius of 2 miles from a position about 7 miles SE of Baohu Jiao.

3.38 Tonggu Zui (Tung-ku Chiao) (Tung-ku Tsui) (19°38'N., 111°02'E.) is a reef-fringed point. It forms the SE extremity of a hilly promontory which rises to a height of 347m about 2 miles NNW. Between Tonggu Zui and the entrance of Ch'ing-lan Chiang, 14 miles SW, the coast is low and reef-fringed. The bight to the W of Tonggu Zui is encumbered by above-water and drying rocks.

Lorne Rock, which covers, is a dangerous pinnacle lying about 11 miles S of Tonggu Zui.

Ch'ing-lan Chiang, lying 11 miles W of Lorne Rock, is a sheltered inlet receding 3 miles NW which leads to a large shallow lagoon. Rocks and sandbars that fringe the entrance uncover at LW and limit the use of the bight for shelter to small vessels. These craft anchor off the entrance of the inlet in a depth of 12.8m, sand and coral, about 2 miles S of the E entrance point. A narrow buoyed channel, about 0.1 mile wide, leads over the bar and into the harbor. The village of Ch'ing-lan is situated on the W bank, 1.5 miles from the W entrance point. In 1989, it was reported that there are two berths built at Ch'ing-lan for vessels up to 5,000 dwt.

Between Ch'ing-lan Chiang and Ta-hua Chiao, 46 miles SSW, the coast is low and flat with scattered hills rising inland. A small cove, the entrance points of which are reef-fringed, is located about 11 miles SW of Ch'ing-lan Chiang. It affords anchorage for small vessels with local knowledge in 11 to 14.6m, sand and mud.

The Wan-ch'uan Ho discharges into Po-au Chiang, a large very shoal lagoon, the entrance of which lies 15 miles SSW of the above cove. A prominent white pagoda stands close S of the entrance. A conspicuous hill, 332m high, rises 11 miles W of the entrance. Several above-water and drying rocks lie close off the lagoon entrance and make it nearly inaccessible. The tallest rock is 7.9m high.

Rocks, some of which uncover, fringe the coast up to 1.5 miles offshore for a distance of about 15 miles S of the lagoon entrance. Scattered hills rise closer to the coast in this vicinity.

Caution.—When piloting between Tung-ku Chiao and Po-au Chiao, vessels should be maintained in depths greater than 27m.

The entrance to another large, but very shallow lagoon, lies 17 miles farther S from the entrance to Po-au Chiang. Two black rocks, the outer rock being 6.1m high, mark the lagoon entrance.

3.39 Baian Dao (Kuan-Ts'ai Ling) (18°49'N., 110°34'E.) is 87m high, with a conspicuous pillar rock on its E end, and lies 2 miles NE of Dahua Jiao. A rock, 12m high, lies at the outer edge of a ledge which extends about 0.8 mile NNW from the islet of Baian Dao. A light is shown from the S extremity of the islet.

Dahua Jiao (Ta-hua Chiao) (18°47'N., 110°33'E.), close off which there is a sunken rock, rises to a height of 124m at its N and highest summit. A signal station stands on the point.

Between Dahua Jiao and Jinmu Jiao, 68 miles SW, the coast is rugged and mostly steep-to. Several fairly deep bays and coves indent the coast between bold headlands and steep points. These are backed by high land with mountains rising in the interior.

The coast between Dahua Jiao and Ma-liu T'ou, a cliffy point located 11 miles SW, is filled by an irregular bight that recedes

2.5 miles NW. Several hilly points which rise to over 91m project slightly seaward. They form coves affording shelter for small craft. Between these points the coast is low and sandy.

Round Islet (18°46'N., 110°30'E.), 71m high, with a rock awash at LW close off its SE side, lies 3 miles SW of Dahua Jiao.

Dazhou Doa (Ta-chou Tao) (18°40'N., 110°29'E.), 4 miles E of Ma-liu T'ou, consists of two high ridges connected by a sandy isthmus which partly covers. The S end rises to 290m. A shoal with depths of less than 7.3m extends 1.3 miles W from the N part of the island.

Anchorage can be taken by vessels with permission in a depth of 13m, mud and sand, off the W side of the island, S of the shoal area or in 20 to 22m, E of the isthmus on the E side of the island.

Ma-liu T'ou (Malow T'ou) (18°40'N., 110°25'E.) rises to a height of 141m near its outer end. It forms the S end of a hilly ridge that extends 2 miles N from the point. Several prominent peaks rise to the W and inland from the point. The highest peaks have been reported to be visible at a distance of 90 miles.

A large, fairly regular bight indents the coast to the NW for a distance of 5 miles and extends between Ma-liu T'ou and Lingshi Jiao which lies 27 miles to the SW. Several islets lie offshore within this bight.

Chou-tzu Tao, 155m high, lies 3 miles SW of Ma-liu Tao with Chia-ching Tao, 79m high, about 4.2 miles farther W. Anchorage, sheltered from NE, can be taken in depths of 11 to 16.5m, sand, about midway between the former island and the point. A shallow lagoon entrance breaks the shoreline between the two islets.

3.40 Fen-chieh Chou (18°35'N., 110°12'E.), 107m high, lies 6.5 miles SW of Chia-ching Tao and 1 mile offshore. This islet has two hummocks. Shunang-fan Shih, 9.5 miles SSW of Fen-chieh Chou is 46m high and about 4 miles offshore. It is the largest of a group of rocks and resembles a junk from the distance.

Lingshi Jiao (Ling-shui Chiao) (18°23'N., 110°03'E.) is the SE extremity of a headland that is cliffy on its S side. It rises to a height exceeding 259m in a range of hummocks that extend 5 miles W from the point. A white tower stands near Lingshi Jiao. The S end of the headland has a 148m high sugar loaf point. A rocky shoal extends nearly 2 miles SW from a reef-fringed point about 2 miles WNW of this latter point.

Anchorage, sheltered from the NE, can be taken in depths of 18 to 22m, mud with the fort at the lagoon entrance NNW of Lingshi Jiao bearing 034°, distant about 3 miles.

Between Lingshi Jiao and **Ya-lung Chiao** (Lang-yeh Chiao) (18°12'N., 109°42'E.), which is the S point of an irregular peninsula projecting SE from Hainan Dao, the coast recedes irregularly about 8 miles to the NW and forms Ling-shui Wan. The N and W shores of this bay are low and sandy, with the exception of the section lying 13 miles W of Lingshi Jiao, where a reef-fringed point with some sunken and above-water rocks interrupts the shore. The narrow coastal plain is backed by hills and mountains to the N and W.

Wu-ch'i Chou (Niu-ch'i Chou) (18°19'N., 109°45'E.), 82m high, lies in the SW part of the bay about 3.5 miles NE of the entrance to a shallow lagoon. The island is cliffy on its S side

and reef-fringed on its N side. A rocky shoal, with a least depth of less than 1.8m, lies 1 mile E of Wu-ch'i Chou.

Anchorage, sheltered from the SW, can be taken in 29m, sand, about 2 miles S of Wu-ch'i Chou.

The peninsula forming the SW side of Ling-shui Wan is indented by several coves around its entire perimeter. It is cliffy, mostly steep-to, and rises to a height of 359m toward its center. The W spit of the peninsula, which has Ya-lung Chiao as its S extremity, forms the E side of Lang-yeh Wan. Pai-hu Chiao, a black, rocky point located 5.5 miles SSW, forms the W entrance point of the bay. The head of the bay is fronted by a sandy beach and backed by hills.

3.41 Lang-yeh Wan contains several islands and islets. **Dongmao Zhou** (18°11'N., 109°41'E.), 111m high, is the outermost island of the bay. A 14m high rock and an 11m high rock lie close E and N, respectively of the island. Hsi Chou, 105m high, lies 1 mile W of Dongmao Zhou and is marked on its SE end by a light.

Yeh-chu Tao, an island, 95m high, stands within the bay about 2.5 miles NW of Dongmao Zhou. Two small islets, Tung-p'a and Hsi-p'ai lie to the W of Yeh-chu Tao. Anchorage can be taken in 12.8 to 14.6m, mud and sand, about 0.8 mile NE of the E end of Yeh-chu Tao. However, the NE wind blows strongly between the hills of the peninsula to the E and during S and SE winds, considerable swell may build up in the bay.

Between Pai-hu Chiao and **Jinmu Jiao** (Chin-mu Chiao) (18°10'N., 109°33'E.), 2.8 miles WSW, the coast is bold and steep-to. This headland marks, at Jinmu Jiao, both the S point of Hainan Dao and for descriptive purposes, the dividing line between the E and W coasts of the island. The peninsula rises to 380m to the NE of the signal station above Jinmu Jiao. A light is shown from the S extremity of this point and the coast to the W is steep-to and bold; a racon is situated at the light.

West Coast of Hainan Dao

3.42 From Jinmu Jiao, the W coast of Hainan Dao trends WNW a distance of 55 miles, then N about 52 miles, and then NE a distance of 49 miles to Bingma Jiao.

Mountains stand fairly close to the S part of this coast forming several fairly bold and prominent points. Along the NW part of the coast, the coastal plain widens. Here, the hills are more isolated and many of the points are low.

Chien-feng Ling, 1,290m high, a conspicuous peak, stands about 16 miles NE of Ying-ko Tsui and 3.8 miles SE of **Tu Ling** (18°45'N., 108°50'E.), which is 1,293m high. The former peak appears as a precipitous crater from SE and NE, but from W appears as a single pinnacle.

Farther inland the mountains of the interior rise to elevations exceeding 1,829m.

Tides—Currents.—The flood current sets WNW at a rate of 2 knots abreast Yai-chou Wan and the ebb sets E at a rate of 1.8 knots.

Abreast Ying-ko Tsui, the flood current sets NW at a rate of 2.3 knots and the ebb current sets SE at a rate of 1.8 knots.

Caution.—When navigating along the W coast of the island, it is recommended that vessels stay in depths greater than 46m in order to stay seaward of the dangers lying off this coast.

Southwest Coast—Jinmu Jiao to Luhuitou Jiao

3.43 Yu-lin Chiang (18°11'N., 109°31'E.) ([World Port Index No. 57765](#)) is a large bay indenting the coast between Jinmu Jiao and Luhuitou Jiao. Yu-lin Chiao, supporting a signal station, is the S end of a small peninsula that divides the N part of the bay. The bay is free of dangers beyond 0.3 mile offshore with the exception of a 3.6m patch which lies 2 miles E and a 7m shoal lying 1.8 miles ENE of **Luhuitou-Ling** (18°10'N., 109°34'E.). To the E and N of this peninsula is the naval port of Yu-lin. The port area is nearly landlocked, but is reported to be able to accommodate vessels with a draft of up to 9.7m; however, it has also been reported that the port is closed to foreign commercial vessels.

Caution.—The approaches to the port of Yu-lin are reportedly dangerous due to mines near Jinmu Jiao, Yu-lin Chiao, Ta-lang Chiao and in Yu-lin Chiang.

Luhuitou Jiao (Lu-hui-t'ou Chiao) (18°11'N., 109°28'E.) is the S extremity of a narrow peninsula that rises to a height of 277m. Between this point and Nan-shan Chiao, 18 miles WNW, the coast recedes 5 miles N forming San-ya Chiang and then tends quite regularly W. The coast is backed by hills and intersected by narrow valleys. Several islands lie across the mouth of San-ya Chiang.

Dongmao Zhou, 79m high, reef-fringed and cliffy on its SE side, lies 4 miles NW of Luhuitou Jiao. Shoals with depths of less than 7.8m exist within 0.5 mile of the island. A reef, with two rocky heads 8.7 and 11m high, lies 1.2 miles SW of the island.

Ximao Zhou (Hsi-mei Chou), 124m high, wooded, reef-fringed and cliffy on its S end, lies about 2.2 miles WNW of Dongmao Zhou. A 38m high islet lies close off the SW end of the island; Pan-hu Shih, a rock which dries 1.1m, lies about 1 mile SW of the islet. A light is shown from the S end of Ximao Zhou.

Caution.—It is recommended that vessels not pass between Dongmao Zhou and Ximao Zhou, nor between Ximao Zhou and Chiao Ling due to a dangerous wreck in the fairway, 2 miles NW of Ximao Zhou.

3.44 Sanya (18°14'N., 109°30'E.) lies on the E side of Sanya Chiang, and is entered between Hsiao Chou, 24m high, located at the W end of a drying reef extending from the shore, 1.5 miles NE of Sanya Chiao, and the SW end of Bai Pai, 0.6 mile NNW. The port is primarily a salt export terminal.

Tides—Currents.—The mean range of the tide is 1.8m.

Depths—Limitations.—An L-shaped pier, divided into three sections, provides 728m of berthing space for general cargo vessels. Berth No. 3 is 92m long and has an alongside depth of 4.5m. Berth No. 4 and Berth No. 5 have a combined length of 250m and an alongside depth of 4.2m. Berth No. 6 and Berth No. 7, 260m long, have an alongside depth of 7.5m. Vessels of 10,000 dwt are loaded and unloaded at the anchorage.

Sanya Lifesaving Station, an L-shaped pier, extends 100m into the channel from an area of reclaimed land on the side of the entrance channel.

The entrance channel, marked by lighted buoys, leads ENE towards the harbor area from a position 0.3 mile N of Xia

Zhou. The depth of the channel is 7m at LW and 9.2m at HW. The maximum allowable draft in the channel is 7m.

Aspect.—Leading lights are established for the entrance channel. The lights in line bearing 071°30' lead in a least charted depth of 7.1m (on the Chinese chart), towards the pier.

Nan-shan Chiao, located about 8 miles W of the last mentioned group of rocks, rises to a height of 490m about 1 mile N of the point. Its summit is flat and bold with a slight saddle in it. A prominent pagoda stands on a hill about 3.5 miles E of the summit.

A rock that dries about 1.8m lies 4.2 miles SW of the point.

Pilotage.—Pilotage is compulsory and is available 24 hours daily. The pilot will board at the Pilot Anchorage (18°11'N., 109°26'E.). The anchorage is established in depths of 20 to 28m, mud, good holding ground, and intended for vessels of up to 10,000 dwt. Vessels awaiting pilotage or quarantine clearance should anchor within 0.5 mile of the pilot boarding place.

Anchorage.—There are three anchorages available, including the Pilotage and Quarantine Anchorage. The Haven Anchorage (18°14'N., 109°26'E.) has depths of 5 to 16m, mud, good holding ground, and accepts vessels of up to 50,000 dwt. The Lightening Anchorage (18°14'N., 109°27'E.) has depths of 8 to 16m, mud, good holding ground, and accepts vessels of up to 50,000 dwt.

Anchorage during the Northeast Monsoon may be obtained outside the port, in a depth of 9m, or inside the entrance, in a depth of 4m, good holding ground.

Vessels should anchor as directed by the pilot in one of the designated anchorages situated in the area NE of Dongmao Zhou and Ximao Zhou. Vessels over 50,000 dwt may choose an anchorage in greater depths.

Vessels should not proceed closer to shore from the anchorage without local knowledge due to the existence of reefs, shoals, and islets to the E and SE.

Directions.—It is recommended that vessels entering Sanya Chiang use the route passing through the following positions (bearings and distances from Ximao Zhou peak, 18°14'N., 109°22'E.):

- a. 225°, 9.0 miles.
- b. 284°, 5.1 miles.
- c. 352°, 1.8 miles.
- d. 044°, 1.3 miles.
- e. 083°, 5.5 miles.

Caution.—Several rocks lie N of the recommended track about 3.2 miles NW of Ximao Zhou.

A lighted production platform stands 48 miles SSW of Nan-shan Chiao; a submerged gas pipeline extends from the platform to the point.

3.45 Yai-chou Wan indents the coast for about 12 miles W of Nan-shan Chiao as far as Fu-jung Ch'i (Fu-jung-ch'i). In the NE part of the bay, a stream discharges into the sea where the coast is low. Fu-jung Ch'i is marked by two, 35m high hummocks.

The islands of **Tung-lo Tao** (18°19'N., 108°59'E.) and Hsi-ku Tao, 2 miles WSW of it, lie to the S Fu-jung Ch'i. A 5.5m shoal lies about 2 miles S of Hsi-ku Tao and a drying rock lies 2 miles S of Hsi-ku Tao.

Between Fu-jung Ch'i and **Ying-ko Tsui** (18°30'N., 108°41'E.), the SW extremity of Hainan Dao, the coast is backed by a low cultivated plain. Ying-ko Tsui is marked by a light; a racon is situated at the light structure. Sandy hillocks, 6.1 to 12.2m high, border the W part of the coast in places. An isolated hill, 119m high, rises 5 miles NE of Ying-ko Tsui. A stream discharges into the sea through the marshes about midway along the shore at the head of the bay. Seaward to the S and SW of the river mouth are several shoal heads having depths of as little as 2.7m.

Eddies are frequently encountered in the vicinity of the banks off the SW coast of Hainan Dao.

West Coast—Ying-ko Tsui to P'ing-ma Chiao

3.46 Yu-lin Chiao (Yu-lin Chou) (19°06'N., 108°36'E.), a 45m high point, stands 36 miles N of Ying-ko Tsui. The intervening coast is indented by two large bights and the shore is mostly low, flat, and sandy. About 12 miles N of Ying-ko Tsui, a spur from the mountains in the interior extends to the coast terminating in a 195m hill.

Several dangerous shoal areas and banks lie a considerable distance off this portion of the coast. Most of these are elongated and lie parallel to the coast. They are relatively steep-to on their seaward sides.

Outer Bank (18°37'N., 108°23'E.), the outermost danger, has a 3.6m shoal head which breaks near its center. Shoal depths extend ESE from this bank to a position lying 3 miles SW of Ying-ko Tsui and N, then NE to about 11 miles SW of Yu-lin Chiao.

Caution.—Due to the shoals and other dangers off the W and SW coast of Hainan Dao, vessels should keep to depths of 46m or greater, and at least 25 miles offshore. With the strong tidal currents and soft nature of the bottom off this coast, the shoal heads may constantly shift position.

Beili Wan (Pei-li Chiang) (19°10'N., 108°35'E.) is a shoal bay indenting the coast between Yulin Chiao and a low sandy spit about 7 miles N. The N part of the bay has drying flats. Shoals with depths of less than 5.5m extend over 5 miles WSW from the N entrance point. Except in the SW part of the bay, the depths are less than 5.5m. Reefs fringe the SE shore of the bay. The port of Basuo Gang is located in Beili Wan and the Pei-li Ho discharges into the bay about 4 miles NE of the harbor. The city of Beili stands 0.5 mile up this river.

Basuo Gang (19°06'N., 108°37'E.)

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3.47 Basuo Gang (T'ung-hai-t'an) (9°06'N., 108°37'E.) is located 0.8 mile E of Yulin Jiao, the westernmost point on Hainan Dao. The harbor is protected by two long breakwaters of large concrete blocks; the N breakwater submerges partially at HW. However, the harbor is exposed to typhoons. The major activities at the port are export of iron ore and fishing. A red light is shown from the N breakwater head, and a green light from the S breakwater head.

Winds—Weather.—The Northeast Monsoon is at strength at Basuo Gang from November through February. Winds blow

out of the NE at force 4 to 7 and sometimes force 8 for several days at a time. During these periods of strong wind, a heavy sea can build up in the open roadstead and cause ships to pitch and roll at the berths within the breakwaters. The Southwest Monsoon season is from April to September.

Fog is not a major problem at Basuo Gang, but heavy rain can be expected at times between June and September.

Storm warnings are given by the signal station on Yu-lin Chiao and should be particularly heeded by vessels at the ore berths during the typhoon season.

Tides—Currents.—Tides at Basuo Gang are usually diurnal. Tidal heights reach a maximum of 3.6m at MHHW, and 0.4m at MLLW. At flood tide, the current flow is NE attaining a rate of 0.8 knots and at ebb tide, it is SW at about 1.3 knots. Offshore currents are governed by the prevailing monsoon and generally parallel the coast.

Depths—Limitations.—The maximum draft for vessels entering the harbor is 9m, although depths of 7.8m are charted on the range line. The approach channel is 120m wide and has a depth of 9m at HW.

North Wharf, comprising Berth No. 1 and Berth No. 2, has a length of 450m and an alongside depth of 9m. The wharf is designed to accommodate ore vessels of up to 20,000 dwt.

South Wharf, comprising Berth No. 3 and Berth No. 4, has a length of 670m and an alongside depth of 9m for general cargo vessels. The wharf is designed to accommodate one vessel of 20,000 dwt and one of 5,000 dwt.

Berth Nos 5 and Berth No. 6 have a combined length of 400m and an alongside depth of 10m. General cargo and LPG vessels of up to 20,000 dwt can be accommodated.

Vessels up to 180m long and 43,000 dwt can be accommodated.

Aspect.—The pyramidal hill on Yu-lin Chiao is very distinctive. A 145m high hill, located 6.5 miles NE of the point, has been reported to be a useful landmark. A light is shown from Yu-lin Chiao.

The entrance channel and breakwaters are marked by range lights and beacons. The axis of the main channel is 089°-269° and is nearly 1 mile long. The breakwaters are visible completely at LW and the ore-loading machinery which extends the length of the ore wharf is distinctive.

Pilotage.—Pilotage, available during daylight only, is compulsory for all foreign vessels entering and leaving the harbor. Vessels are boarded in the quarantine anchorage 1.6 miles NW of the harbor entrance.

Regulations.—Masters are requested to radio Basuo Gang the following information 72 hours, 48 hours, and 24 hours before arrival or immediately on departure from their last port of call:

1. ETA and route taken.
2. Cargo to load.
3. Ship's overall length, breadth, draft, and tons per inch immersion.
4. Type and quantity of dangerous cargo on board.

A subsequent message 16 hours before arrival should give an amended ETA.

Anchorage.—The Pilot and Quarantine Anchorage is situated 1.8 miles NW of the N breakwater, in depths of 8 to 11m, mud and sand. The anchorage may prove to be untenable

in a strong wind, as it is exposed, and the holding ground is reported to be marginal.

Directions.—Vessels should make Yulin Jiao, and from a position with the lighthouse bearing between 100° and 110°, distant 10 miles, should steer for the quarantine anchorage. The channel entrance is marked on the S side by a lighted buoy moored 0.6 mile NW of Yu-lin Chiao.

Caution.—Numerous fishing stakes and fixed nets exist in the approaches to Basuo Gang.

A dangerous wreck lies 3 miles W of Yu-lin Chiao Light.

West Coast of Hainan Dao (Continued)

3.48 Between **Ssu-keng-sha Chiao** (19°13'N., 108°37'E.), the N entrance of Beili Wan and Ta-chiao T'ou, a bold, rocky point 10 miles NNE, the coast is low. The Ch'ang Chiang discharges through a wide delta with several mouths about midway between these two points. Depths are very shoal near the delta. Farther N, a sunken rock lies 2.8 miles SW of Ta-chiao T'ou.

Anchorage.—Lying 16 miles NE of Ta-chiao T'ou is a shallow lagoon entrance used by fishermen. The entrance can be identified by a conspicuous fort which stands near it. Exposed anchorage in 13m can be taken off this entrance with the fort bearing 114°, distant about 3 miles.

Caution.—Vessels should give this portion of the coast a wide berth due to the obstruction area lying offshore between the river mouth and Ta-chiao T'ou.

3.49 **Yang-p'u Wan** (19°42'N., 109°06'E.) recedes 5 miles E between **Guanyin Jiao** (19°35'N., 109°00'E.) and Shenjian Chiao, 15 miles NE. The head of the bay is shoal and it is reef-fringed on the SE and NE sides.

Lin-ch'ang Shih (Ta-ch'an) (19°41'N., 109°06'E.), is a reef which has a low, sand cay and an islet on it, and together with a

reef extending W from the low, sandy peninsula projecting WSW into the bay from its NE part, obstructs the entrance to Yang-p'u Chiang.

Depths—Limitations.—The port has 26 deep water berths for the handling of steel products, general and bulk cargo, and containers.

Yang-p'u Chiang has a coal terminal for vessels of 20,000 dwt, a container berth for a 20,000 dwt vessel, and a berth for vessels of 3,000 dwt. Vessels should contact local authorities for more information.

The maximum permissible draft in the harbor is 11m at LW, or 13m at HW. The maximum allowable vessel length is 200m.

Anchorage.—Vessels anchor about 0.8 mile offshore in a depth of 15m, sand.

Small vessels with local knowledge can proceed to a sheltered anchorage in 7.3 to 9.1m close within the entrance of a large lagoon, which has its entrance at the head of the bay. A narrow, buoyed channel, with a least known depth of 4.2m across the bar, leads clear of the reefs and sandbanks to the lagoon entrance.

3.50 **Shen-chien Chiao** (19°47'N., 109°09'E.) is a cliffy, reef-fringed point with a conspicuous pillar rock, 18m high, lying close WSW. A conspicuous pagoda stands on the N side of the point. The remainder of the coast, NE to **Bingma Jiao** (19°55'N., 109°18'E.), a distance of about 11 miles, is reef-fringed to a distance of 0.8 mile offshore in places. Bingma Jiao is marked by a light; a signal station and racon are situated at the light structure. Ping-ma Shan, an important landmark in the approach to the W entrance of Ch'iung-chou Hai-Hsia from SW, rises to a height of 211m about 3.5 miles SSW of Bingma Jiao.

Caution.—Two wrecks lie approximately 10.5 miles WNW of Bingma Jiao, and are best seen on the chart.